

Rules. See Certification That Sections 603 and 604 of the Regulatory Flexibility Act Do Not Apply to Rule Making to Amend Sections 73.202(b), 73.504 and 73.606(b) of the Commission's Rules, 46 FR 11549, February 9, 1981.

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FEDERAL COMMUNICATIONS COMMISSION

John A. Karousos
Chief, Allocations Branch
Policy and Rules Division
Mass Media Bureau

APPENDIX

1. Pursuant to authority found in Sections 4(i), 5(e)(1), 303(g) and (r) and 307(b) of the Communications Act of 1934, as amended, and Sections 0.61 U.204(b) and 0.283 of the Commission's Rules, IT IS PROPOSED TO AMEND the Television Table of Allotments, Section 73.606(b) of the Commission's Rules and Regulations, as set forth in the Notice of Proposed Rule Making to which this Appendix is attached.

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Before the
Federal Communications Commission
Washington, D.C. 20554

LETTER
January 31, 1996

Released: February 13, 1996

In reply refer to:
1800B3-DEB

ECL License Company, Inc.
Suite 409
401 City Avenue
Bala Cynwyd, PA 19004

In re: KNRK, Camas, WA
ECL License Company, LP
BPH-9408291C

Gentlemen:

This letter is in reference to the above-captioned minor ~~rule making~~ application for station KNRK (formerly KMUZ-TV), Camas, WA, which was filed by the former licensee of KNRK, Pacific Northwest Broadcasting Corp. ("PNBC"). The application proposes to upgrade from Class C3 to Class C2 on Channel 234 as authorized by the Report and Order in MM Docket 92-241, 8 FCC Rcd 1796 (1993). To accomplish this upgrade at the proposed transmitter site, the application requests that a waiver of the minimum distance separation table in the contour protection rule (47 CFR § 73.215(e)) be granted. For the reasons set forth below, we deny the request the waiver and dismiss the application as unacceptable for filing.

PNBC's Waiver Request

The site proposed in the application is that presently used by KNRK for its licensed Class C3 operation.¹ This site is spaced 167.4 km from first-adjacent channel Class C station KMGE, Eugene, OR, whereas § 73.207 requires a minimum separation of 188 km. Recognizing this 20.6 km

¹ KNRK's Class C3 operation is already licensed as a contour protection station under § 73.215 with respect to KMGE, Eugene, OR and KUKN, Kelso, WA.

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³ The Class C2 site originally sought in the rulemaking proceeding (East Larch Mountain) was located within this area.

short-spacing, PNBC has requested from the contour protection rule.⁴ Although provides the minimum protection to KNRK 73.215(e), the proposed site falls 20.6 km minimum spacing required by § 73.207. PNBC has requested that the table be waived in this instance.

In support of its request for waiver finding, PNBC states from which KNRK's C2 operation while still providing a signal to the station's community of licensees, it is difficult, ~~likely~~ around the city limits of Camas, WA, from which KNRK's ~~line-of-sight~~ operation to Camas, WA, be further restricted by the Bull Run Management Unit, which prohibits most construction. Another site on Pepper Mountain determined to be unsuitable due to the Columbia River Gorge National Scenic Area make construction difficult if not in the area would also arouse public opposition. Powell Butte, and Walters Hill were found to have land use and zoning would be unlikely to permit construction. Mountain was evaluated but found a ridge which would cause shadowing of Camas, Mt. Zion, an existing commercial microwave service and utility site, Columbia River National Scenic Area construction of a tower unlikely.⁵ Walters Hill was evaluated but rejected effects and likely local opposition included that its only option is to licensed transmitter site.

In addition, PNBC contends it ~~waiver~~ of § 73.215(e) sought precedent.⁶ PNBC cites *St. Croix* FCC Rcd 7329 (MMB 1993), where § 73.215 (a)(4) to afford the station consider short-spaced transmitter or stations from interference in occur under the Commission's policy that its showings clearly demonstrate transmitter sites available to K threshold criteria required under

⁴ A copy of a letter dated August 1993, Carolyn Coons and Klaus Heyne, Guardians of Larch Mountain, in posed PNBC's earlier request to would also oppose any request of Mountain or in the Columbia River Area.

⁵ A letter dated August 25, 1993, Premise Planning Director of Multnomah County, Oregon, indicates that local ordinances prohibit construction of a tower in the area. In addition, a letter is provided Consultant, outlining the difficult the documentation necessary to in Multnomah County, and its siting.

⁶ A letter is provided from Rob indicating that any effort to construct River Gorge National Scenic Area and money" and would probably

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IBC also notes that the Commission in MM Docket 92-241 that the Class C2 would serve the public allow KNRR to expand its coverage in § 73.215(e) only because the Docket 87-121 proceeding (which not indicate the fullest extent to which a directional antenna can be used) was not the Commission's rules. Finally, in the Memorandum Opinion in Docket 87-121, *supra*, where the Commission of § 73.215 may be warranted in cases if the waiver request is in accordance, PNBC believes that its § 73.215(e) is warranted.

DISCUSSION

To understand our decision in this proceeding, we will then discuss the waiver request.

The minimum distance separation rule of § 73.207 determine how close the FM station can be to another same or adjacent channels, or on any (IF) channel. Prior to the effective June 26, 1989, applicants which faced transmitter site could request

or permittee of an existing station transmitter site to a short-spaced transmitter site to make a three part threshold that (1) the present site was no alternative non-short-spaced sites (3) that the proposed transmitter site was available.¹² After meeting the applicant was then required to showings generally consisted of an affidavit from engineering and governmental officials, aeronautical and realtors as appropriate to the amounts of short-spacing required to demonstrate compliance with public interest showing require-

The preparation and processing of requests for waiver of § 73.207 proved to be increasingly burdensome and consuming for both applicants and the staff. When considering a spacing waiver request, it was necessary for the staff to compare (and contrast) the threshold and public interest showings against prior precedents for the same degree of short-spacing and to make judgments regarding the merits and deficiencies of each waiver request. In some instances, the validity and accuracy of the information submitted was called into question by the staff or a petitioner, requiring additional justification by the applicant and additional review by the staff. Grant or denial of waiver requests required that the staff explain in detail the reasons why it was taking that action.

Moreover, the staff was empowered to grant spacing waiver requests of § 73.207 only up to a maximum of 6 km (3.7 miles). Requests for greater amounts of short-spacing (in excess of 6 km) which met the threshold and public interest requirements generally necessitated a referral to the Commission for consideration.

Spacing Waiver Request Discontinued. On June 26, 1989, the current contour protection rules (contained in 47 CFR § 73.215) went into effect.¹⁴ These rules specified an alternative procedure by which an applicant could apply to a site which did not meet the minimum distance separation requirements of § 73.207. No threshold or public interest showings were required; rather, an applicant was required to demonstrate that no prohibited contour overlap (and hence interference), would be created with the short-spaced station. To limit the amount of short-spacing which might be proposed, the Commission established a new, less restrictive minimum separation table (contained in § 73.215(e)) for sole use with the contour protection rule.

Contour Protection. The contour protection rule contains distinct advantages over the earlier waiver request system. It eliminates the need to gather and present documentation to meet the threshold and public interest criteria, replacing those procedures with a simple go/no-go analysis. The new procedure also insures that neither of the short-spaced stations would receive increased interference, a factor not normally considered under the former spacing waiver system. It also allowed the Commission to discontinue processing of more burdensome and less technically sound spacing waiver requests (including *de minimis* requests).¹⁵

In addition, the contour protection rule affords cochannel and first-adjacent channel applicants far greater latitude in specifying a transmitter site than did the earlier spacing waiver process. For cochannel stations, only one out of 28 possible combinations between the various classes of stations receives less than 11 km additional short-spacing from the minimum distance separation required by § 73.207.¹⁶ Similarly for first-adjacent channel stations, out of

28 possible combinations between the various classes of stations, none receives less than 10 km additional short-spacing from the minimum distance separation requirements of § 73.207. These maximum limits are at least 4 km (and in many instances much greater) than the 6 km limit under the former spacing waiver process which necessitated referral of the application to the Commission for review. Moreover, these short-spacings can now be obtained through routine processing of applications.

The PNBC Request for Waiver of § 73.215(e)

After review, for the reasons stated below, we find that waiver of § 73.215(e) is not warranted in this instance. The former § 73.207 threshold criteria are not applicable to requests for waiver of § 73.215(e). As indicated earlier, the PNBC application fails to meet the minimum spacing requirements of §§ 73.207 and 73.215 by 20.6 km and 8.6 km, respectively. We do not believe that the old § 73.207 spacing waiver procedures are relevant to requests for waiver of the § 73.215(e) spacing table. While both rules contain minimum required spacing between stations, it must be noted that the latter rule section already incorporates 12 km of relief from the § 73.207 required spacing, an amount double that which would have triggered Commission review under the old system. To this, PNBC proposes an additional 8.6 km of short-spacing.¹⁷

PNBC's request and the threshold showing. The former spacing waiver threshold showing consisted of three parts, all of which had to be met:

- (1). *The present site is no longer suitable.* Here, PNBC is arguing the converse, that there is no other site from which KNRR can operate with Class C2 facilities. Moreover, the present site is suitable for PNBC's present Class C3 operation and fully complies with the rules for Class C3 stations, including city coverage pursuant to § 73.315.
- (2). *Alternative non-short-spaced sites are not available.*
- (3). *The proposed transmitter site is the least short-spaced site available.*

PNBC's submission clearly demonstrates that alternative fully spaced sites are not available within the 8.6 km shortfall from § 73.215(e). However, little consideration seems to have been given to sites which fall in the 12 km between § 73.215(e) and § 73.207. Consequently, we cannot find that PNBC has provided sufficient information to show that the proposed transmitter site is the least short spaced site available.

¹² We believe that it would make more sense to apply the former threshold criteria to the total amount of short-spacing proposed under § 73.207, not simply the additional amount under § 73.215(e). Otherwise, precedent cochannel and first-adjacent channel short-spacing waiver cases are not valid for comparison, since such § 73.215 applicants already are eligible for short-spacing from § 73.207 greatly in excess of most precedent cases. Consequently, we hold that PNBC's waiver request must be compared against precedent cases in which the short spacing from § 73.207 is 20.6 km, not 8.6 km.

¹⁴ We note that Boone Biblical College ordered the institution

Spacing Waiver precedents. PNBC has cited no cases in which the Commission has granted an applicant's request to upgrade its operation to the next higher class a spacing waiver comparable to this. Nor is the staff aware of any such case approved by the Commission. Indeed, in a situation involving a case requesting somewhat greater short-spacing (17 miles = 27 km), the Commission denied the application on the grounds that the proposed short-spacing was excessive and that "strict enforcement of the mileage separation rule is of paramount importance to the integrity of the entire FM assignment plan." Boone Biblical College, 15 FCC 2d 861 (1969), *recon. denied*, 19 FCC 2d 155 (1969).¹⁸ Even in *Megamedia*, 67 FCC 2d 511 (1978), where the short-spacing was necessitated by health and safety concerns, the short-spacing under § 73.207 approved by the Commission was 8 miles (13 km) — a far cry from the 20.6 short-spacing proposed by PNBC.¹⁹ Therefore, we conclude that Commission precedent does not support grant of the waiver request.

The purpose underlying § 73.215 is to afford applicants greater flexibility in specifying transmitter sites. The rule was indeed adopted for this purpose, as the Commission has stated.²⁰ That flexibility was limited by the Commission through the minimum separation table § 73.215(e). PNBC is correct in that these spacings were chosen "because the technical record in this proceeding does not clearly indicate the fullest extent to which FM directional antennas could be employed."²¹ However, technical matters are not the only issue here.

The present § 73.207 spacing table was adopted in part to insure a fair distribution of FM service across the country, avoiding concentrations of stations in specific locations.²² Each waiver of a spacing rule undermines this policy objective to some extent by increasing the spectral crowding of stations in the FM band. Thus, although an individual waiver may be appealing because the area and population served by a particular station is increased, waiver of the spacing rules lose their appeal when considered in light of the larger policy objectives of maintaining a fair distribution of stations while protecting the service areas of stations.²³

Grant of a waiver to PNBC would undermine these policy objectives by serving as precedent for additional waivers of the § 73.215(e) table by cochannel and first-adjacent channel applicants. Contrary to PNBC's assertion, the waiver request does not appear to be unique; the staff has received numerous telephone inquiries concerning the possibility of waiver of § 73.215(e) for cochannel and first-adjacent channel stations. Over time, such waivers would effectively eliminate §§ 73.207 and 73.215(e) as a tool for achieving a fair distribution of stations.

of a rulemaking to delete the deficient allotment.

¹⁸ Additionally, *Megamedia* involved a third-adjacent channel waiver, not first-adjacent as proposed by PNBC.

¹⁹ Report and Order in Docket 87-121, *supra* at Paragraph 33.

²⁰ Paragraph 32, Report and Order in MM Docket 87-121, *supra*.

²¹ First Report and Order in MM Docket 14185, 23 RR at 1817, Paragraph 37.

²² St. Cruz Wireless Company, Inc., *supra* did not violate any of these policy objectives since the matter did not involve the spacing table, but rather the protected and interfering contours to be used for stations in Puerto Rico and the Virgin Islands.

Megamedia, 67 FCC 2d 1527, 1528 (1972).

¹³ An exception to these requirements was made for *de minimis* short-spacings of 1.6 km or less.

¹⁴ Report and Order in MM Docket 87-121, 4 FCC Red 1041 (1989), *recon. granted in part and denied in part*, 6 FCC Red 1356 (1991).

¹⁵ Report and Order, *supra* at Paragraph 33, Memorandum Opinion and Order in MM Docket 87-121, 6 FCC Red 3356 (1991) at Paragraphs 24-27.

¹⁶ Cochannel Class B to Class C stations receive only 4 km additional short-spacing under § 73.215(e).

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1 ADJ

that the threshold criteria under the process may not be strictly applicable to try contend that such criteria "may be using whether a waiver is warranted." M Docket 92-241, 8 FCC Red 1796 at

M Docket 87-121, *supra* at Paragraph

111, 70 FCC 2d 153 (Rev. Ed. (1978)).

on Broadcasting, Inc., 62 FCC 2d 45,

111, 70 FCC 2d 153 (Rev. Ed. (1978)).

In addition, if the former threshold criteria are to be revived for requests for waiver of § 73.215(e), we will have defeated a primary purpose for the adoption of the contour protection rule -- to provide for increased flexibility in site location while eliminating the need to evaluate complex, time-consuming, and less technically sound spacing waiver requests.

Docket 87-121 indicated that waiver of the rule may be in the public interest in some instances. PNBC's referral to Footnote 27 of the Memorandum Opinion and Order in MM Docket 87-121, *supra*, does not support the present waiver request. The footnote clearly refers to a ~~station seeking a waiver of the rule~~ station. In that context, a ~~station seeking a waiver of the rule~~ station, not § 73.215(e), since it is difficult to multiplex a directional FM station with other nondirectional FM stations.²⁴ In any event, for the reasons explained below, we do not find that a grant of the requested waiver would serve the public interest.

While Docket 92-214, which adopted KNRK's Class C2 allotment, indicated that upgraded operation for that station would serve the public interest, that observation was general in nature since a larger station will almost always serve more people and there was nothing in the record to suggest there would be any adverse consequences. The rulemaking did not anticipate PNBC seeking a short-spacing of the magnitude proposed here. Since it has, we are compelled to consider the impact of the present waiver request (and future requests which invariably will cite this case as precedent) on our FM allocations scheme. The operation proposed for KNRK is a good example of what can be expected to occur when cochannel and first-adjacent channel stations are crowded together. To attain Class C2 operation, KNRK must significantly suppress radiation in two large areas to the northwest and south-southeast, to the point that greater suppression is required than is presently the case for KNRK's Class C3 operation.²⁵ Nor does KNRK gain any significant service in these directions as compared to the present directional Class C3 operation. Thus, we observe that permitting such waivers would encourage other applicants to seek operations which do not comply with our rules in exchange for marginal gains in service.²⁶ Finally, we note that the Commission has elsewhere denied a request for waiver of the spacing rules where increased coverage was the primary justification.²⁷ Therefore, we do not believe that the public interest is satisfied by the present PNBC proposal.

CONCLUSIONS

In these times of shrinking government resources, it is not an efficient use of the Commission's limited staff resources to allow new filings based on an inherently inefficient spacing waiver process. As we noted above, the

²⁴ Were a nondirectional contour protection station to locate on a multiplexed antenna located at the minimum cochannel or first adjacent channel separation prescribed by § 73.215(e), that station would be limited to approximately the maximum facilities for the next lower class of station.

²⁵ Thus, where a nondirectional maximum Class C2 (61 dBu) service area is approximately 78% larger than a maximum Class C3 operation, KMUZ would increase its proposed service area by only 29%.

²⁶ For example, PNBC referred to its difficulties in obtaining a

contour protection rule was adopted in part to eliminate the inefficiencies associated with the former spacing waiver process. With the Audio Services Division currently processing in excess of 1000 FM construction permit applications per year, and with these applications steadily increasing in difficulty as the FM band fills up, we see a justification in needlessly complicating and slowing the application process for substandard operations.

PNBC's showings have amply demonstrated that there is no fully spaced transmitter site (including the reference coordinate site) which complies with the minimum separation requirements of § 73.207 and at which a Class C3 operation could be constructed. It also appears that PNBC has been unable to find a suitable site which complies with the separation requirements of § 73.215(e).

Additional 12 km. of tower that § 73.215(e) was compared to § 73.207. These facts suggest that the Channel

was adopted by the Commission.

A substandard allotment is not a compelling basis for waiver of the Commission's technical rules covering construction permit applications. Cf. *Chen and Wedgfield, SC, recon. denied*, 4 FCC Rcd 4503 (1989); *review denied*, 5 FCC Rcd 5572 (1990). Nor do we find the other factors cited by PNBC (additional population served, reduction in existing prohibited contour overlap with KMGE) serve the public interest more than adherence to our technical rules. Consequently, the appropriate action under these circumstances is deletion of the substandard allotment. See *Pinckneyville, Illinois*, 41 RR 2d 44 (1977); *Naichesoches, Louisiana*, 52 RR 2d 1588 (1983); *For Knoll Shores, NC*, 60 Fed. Reg. 64348 (December 15, 1995). Accordingly, this matter is being referred to the Bureau's Allocations Branch for appropriate action.

FINAL ACTIONS

We have afforded the requests for waiver of § 73.215(e) the "hard look" called for under *WATT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), but find that the facts and circumstances presented in the applicants' justifications are insufficient to establish that grant of the requested waiver would be in the public interest. Accordingly, the request for waiver of 47 CFR § 73.215(e) made by Pacific North West Broadcasting Corporation (KNRK) IS HEREBY DENIED. In addition, pursuant to Paragraph 22 of the *Report and Order* in MM Docket 91-347, 7 FCC Rcd 5074 (1992) since the applications requested waiver of a rule but the waivers were denied, these applications may not be amended to rectify the deficiencies. Therefore, application BPH 940829IC IS HEREBY DISMISSED as unacceptable for filing.

suitable site for Class C3 operations in its previous applications BPH 880310MB, BPH 920206ID, and BPH 920831IH. ~~PNBC could not have been unaware that the Class C2 operation proposed in Docket 92-214 could face similar problems.~~

Muscat of the South, Inc., 45 RR 2d 1232 (1974) six miles (9.6 km) short-spacing requested and denied.

Not only was the proposed allotment site unsuitable for broadcast operation at the time this application was filed, it appears that the allotment reference site was unsuitable even prior to the adoption of the upgraded allotment.

Sincerely,

Dennis Williams
Assistant Chief,
Audio Services Division
Mass Media Bureau

cc: Radio Station KNRK
McClanathan and Associates, Inc.
John Karousos, Chief, Allocations Branch

1000 FM PERMIT REQUEST

Rules. See Certification That Sections 603 and 604 of the Regulatory Flexibility Act Do Not Apply to Rule Making to Amend Sections 73.202(b), 73.504 and 73.606(b) of the Commission's Rules, 46 FR 11549, February 9, 1981.

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Before the
Federal Communications Commission
Washington, D.C. 20554

LETTER
January 31, 1996

Released: February 13, 1996

In reply refer to:
180083-DEB

ECI License Company, Inc.
Suite 409
401 City Avenue
Bala Cynwyd, PA 19004

la re: KNRK, Camas, WA
ECI License Company, LP
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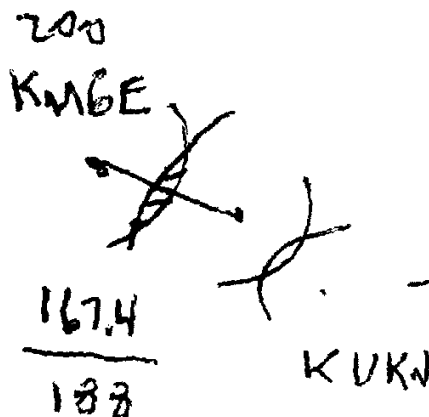
short-spacing, PNBC has requested procedure for the contour protection rule.² Although provides the contour protection to KMC 73.215(a), the proposed site falls 8.6 km km minimum spacing required by § 73.207. PNBC has requested that the table be waived in this instance.

In support of its request for waiver, finding suitable sites from which KNRK, C2 operation while still providing the signal to the station's community of licensees. Hills around the city limit the meter sites from which KNRK would line-of-sight operation to Camas. Potentially further restricted by the Bull Run 1 ment Unit, which prohibits most construction on Pepper Mountain was determined to be unsuitable due to its Columbia River Gorge National Scenic make construction difficult if not impossible area would also arouse public opposition. Powell Butte, and Walters Hill were found to have land use and zoning would be unlikely to permit construction. Mountain was evaluated but found to be a ridge which would cause shadowing. Camas, Mt. Zion, an existing community microwave service and utility site, is Columbia River National Scenic Area, construction of a tower unlikely.³ Finlery Hill was evaluated but rejected effects and likely local opposition. T cluded that its only option is to relocate transmitter site.

In addition, PNBC contends that waiver of § 73.215(e) sought is precedent.⁴ PNBC cites St. Croix Wire FCC Red 7329 (MMB 1993), where 73.215 (a)(4) to afford the station the consider short-spaced transmitter sites or stations from interference in excess occur under the Commission's spacing that its showings clearly demonstrate transmitter sites available to KNRK threshold criteria required under the

⁴ A copy of a letter dated August 9, Carolyn Coons and Klaus Heyne, Co-Guardians of Larch Mountain, indicated PNBC's earlier request to use would also oppose any request of PNBC Mountain or in the Columbia River Area.

⁵ A letter dated August 25, 1994 is Preliminary Planning Director of Multnomah indicates that local ordinances promote it. In addition, a letter is provided from Consultant, outlining the difficulties in the documentation necessary to justify in Multnomah County, and its slim chance. A letter is provided from Robert K. indicating that any effort to construct River Gorge National Scenic Area we and money" and would probably result



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also notes that the Commission MM Docket 92-241 that the C2 would serve the public KNRK to expand its coverage its that the Commission chose § 73.215(e) only because the that 87-121 proceeding (which indicate the fullest extent to could be utilized." Here, how a directional antenna can be Commission's rules. Finally, 7 of the Memorandum Opinion 17-121, supra, where the Com- of § 73.215 may be warranted as if the waiver request is in- ingly, PNBC believes that its 5(e) is warranted.

DISCUSSION

Understand our decision in this de some background on the rule. We will then discuss the request.

The minimum distance separa- § 73.207 determine how close FM station can be to another or adjacent channels, or on (F) channel. Prior to the effec- 26, 1989, applicants which d transmitter site could request

permittee of an existing station er site to a short-spaced trans- make a three part threshold (1) the present site was no lternative non-short-spaced sites that the proposed transmitter d site available.¹² After meeting plicant was then required to cing requirements would serve wings generally consisted of an why the spacing waiver was affidavits from engineering con- nental officials, aeronautical reators as appropriate to the sunts of short-spacing required ion to demonstrate compliance ible interest showing require-

The preparation and processing of requests for waiver § 73.207 proved to be increasingly burdensome and consuming for both applicants and the staff. When entering a spacing waiver request, it was necessary for the showings against prior precedents for the same degree short-spacing and to make judgments regarding the and deficiencies of each waiver request. In some instances the validity and accuracy of the information submitted called into question by the staff or a petitioner, requiring additional justification by the applicant and additional view by the staff. Grant or denial of waiver request required that the staff explain in detail the reasons why taking that action.

Moreover, the staff was empowered to grant spacing waiver requests of § 73.207 only up to a maximum of 4 km (3.7 miles). Requests for greater amounts of short-spacing (in excess of 6 km) which met the threshold and public interest requirements generally necessitated a referral to the Commission for consideration.

Spacing Waiver Requests Discontinued. On June 26, 1989 the current contour protection rules (contained in 47 CFR § 73.215) went into effect.¹⁴ These rules specified an alternative procedure by which an applicant could apply to a site which did not meet the minimum distance separation requirements of § 73.207. No threshold or public interest showings were required; rather, an applicant was required to demonstrate that no prohibited contour overlap (and hence interference), would be created with the short-spaced station. To limit the amount of short-spacing which might be proposed, the Commission established a new, less restrictive minimum separation table (contained in § 73.215(e)) for sole use with the contour protection rule.

Contour Protection. The contour protection rule contains distinct advantages over the earlier waiver request system. It eliminates the need to gather and present documentation to meet the threshold and public interest criteria, replacing those procedures with a simple go/no-go analysis. The new stations would receive increased interference, a factor not normally considered under the former spacing waiver system. It also allowed the Commission to discontinue processing of more burdensome and less technically sound spacing waiver requests (including *de minimis* requests).¹⁵

In addition, the contour protection rule affords cochannel and first-adjacent channel applicants far greater latitude in specifying a transmitter site than did the earlier spacing waiver process. For cochannel stations, only one out of 28 possible combinations between the various classes from the minimum distance separation required by § 73.207.¹⁶ Similarly for first-adjacent channel stations, out of

28 possible combinations between the various classes of stations, none receives less than 10 km additional short-spacing from the minimum distance separation requirements of § 73.207. These maximum limits are at least 4 km (and in many instances much greater) than the 6 km limit under the former spacing waiver process which necessitated referral of the application to the Commission for a decision. Moreover, these short-spacings can now be obtained through routine processing of applications.

The PNBC Request for Waiver of § 73.215(e)

After review, for the reasons stated below, we find that waiver of § 73.215(e) is not warranted in this instance. The § 73.207 threshold criteria are not applicable to requests for waiver of § 73.215(e). As indicated earlier, the KNRK application fails to meet the minimum spacing requirements of §§ 73.207 and 73.215 by 20.6 km and 8.6 km, respectively. We do not believe that the old § 73.207 spacing waiver procedures are relevant to requests for waiver of the § 73.215(e) spacing table. While both rules contain a minimum required spacing between stations, it must be noted that the latter rule section already incorporates 12 km of relief from the § 73.207 required spacing, an amount double that which would have triggered Commission review under the old system. To this, PNBC proposes to add an additional 8.6 km of short-spacing.¹⁷

PNBC's request and the threshold showing. The former spacing waiver threshold showing consisted of three parts, all of which had to be met:

- (1). *The present site is no longer suitable.* Here, PNBC is arguing the converse, that there is no other site from which KNRK can operate with Class C2 facilities. Moreover, the present site is suitable for PNBC's present Class C3 operation and fully complies with the rules for Class C3 stations, including city coverage pursuant to § 73.315.
- (2). *Alternative non-short-spaced sites are not available.*
- (3). *The proposed transmitter site is the least short-spaced site available.*

PNBC's submission clearly demonstrates that alternative fully spaced sites are not available within the 8.6 km shortfall from § 73.215(e). However, little consideration seems to have been given to sites which fall in the 12 km between § 73.215(e) and § 73.207. Consequently, we cannot find that PNBC has provided sufficient information to show that the proposed transmitter site is the least short spaced site available.

Spacing Waiver precedents. PNBC has cited no cases in which the Commission has granted an applicant seeking to operate in the next higher class a spacing waiver. Nor is the staff aware of any such case approved by the Commission. Indeed, in a situation involving a case requesting somewhat greater short-spacing (20.6 km), the Commission denied the application on the grounds that the proposed short-spacing was excessive and that "strict enforcement of the minimum separation rule is of paramount importance to the integrity of the entire FM assignment plan." *Boone Biblical College*, 15 FCC 2d 861 (1969), *recon. denied*, 19 FCC 2d 155 (1969).¹⁸ Even in *Megamedia*, 67 FCC 2d 511 (1978), where the short-spacing was necessitated by health and safety concerns, the short-spacing under § 73.207 approved by the Commission was 8 miles (13 km) – a far cry from the 20.6 short-spacing proposed by PNBC.¹⁹ Therefore, we conclude that Commission precedent does not support grant of the waiver request.

The purpose underlying § 73.215 is to afford applicants greater flexibility in specifying transmitter sites. The rule was indeed adopted for this purpose, as the Commission has stated.²⁰ That flexibility was limited by the Commission through the minimum separation table § 73.215(e). PNBC is correct in that these spacings were chosen "because the technical record in this proceeding does not clearly indicate the fullest extent to which FM directional antennas could be employed."²¹ However, technical matters are not the only issue here.

The present § 73.207 spacing table was adopted in part to insure a fair distribution of FM service across the country, avoiding concentrations of stations in specific locations.²² Each waiver of a spacing rule undermines this policy objective to some extent by increasing the spectral crowding of stations in the FM band. Thus, although an individual waiver may be appealing because the area and population served by a particular station is increased, waiver of the spacing rules lose their appeal when considered in light of the larger policy objectives of maintaining a fair distribution of stations while protecting the service areas of stations.²³

Grant of a waiver to PNBC would undermine these policy objectives by serving as precedent for additional waivers of the § 73.215(e) table by cochannel and first-adjacent channel applicants. Contrary to PNBC's assertion, the waiver request does not appear to be unique: the staff has received numerous telephone inquiries concerning the possibility of waiver of § 73.215(e) for cochannel and first-adjacent channel stations. Over time, such waivers would effectively eliminate §§ 73.207 and 73.215(e) as a tool for achieving a fair distribution of stations.

¹² We believe that it would make more sense to apply the former threshold criteria to the total amount of short-spacing proposed under § 73.207, not simply the additional amount under § 73.215(e). Otherwise, precedent cochannel and first-adjacent channel short spacing waiver cases are not valid for comparison, since such § 73.215 applicants already are eligible for short-spacing from § 73.207 greatly in excess of most precedent cases. Consequently, we hold that PNBC's waiver request must be compared against precedent cases in which the short-spacing from § 73.207 is 20.6 km, not 8.6 km.

¹³ We note that *Boone Biblical College* ordered the institution

of a rulemaking to delete the deficient allotment.

¹⁴ Additionally, *Megamedia* involved a third-adjacent channel waiver, not first-adjacent as proposed by PNBC.

¹⁵ *Report and Order* in Docket 87-121, supra at Paragraph 33.

¹⁶ Paragraph 32, *Report and Order* in MM Docket 87-121, supra.

¹⁷ *First Report and Order* in MM Docket 14185, 23 RR at 1817, Paragraph 37.

¹⁸ *St. Croix Wireless Company, Inc.*, supra did not violate any of these policy objectives since the matter did not involve the spacing table, but rather the protected and interfering contours to be used for stations in Puerto Rico and the Virgin Islands.

Megamedia, 67 FCC 2d 1527, 1528 (1972).

¹⁹ An exception to these requirements was made for *de minimis* short-spacings of 1.6 km or less.

²⁰ *Report and Order* in MM Docket 87-121, 4 FCC Red 1041 (1989), *recon. granted in part and denied in part*, 6 FCC Red 5356 (1991).

²¹ *Report and Order*, supra at Paragraph 33; *Memorandum Opinion and Order* in MM Docket 87-121, 6 FCC Red 5356 (1991) at Paragraphs 24-27.

²² Cochannel Class B to Class C stations receive only 4 km additional short-spacing under § 73.215(e).

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the threshold criteria under the is may not be strictly applicable to contend that such criteria "may be whether a waiver is warranted." Docket 92-241, 8 FCC Red 1796 at

Docket 87-121, supra at Paragraph

1, 70 FCC 2d 153 (Rev. Bd. 1978).

Broadcasting, Inc., 62 FCC 2d 45,

South, 43 RR 2d 1213 (1979); also

In addition, if the former threshold criteria are to be revived for requests for waiver of § 73.215(e), we will have defeated a primary purpose for the adoption of the contour protection rule -- to provide for increased flexibility in site location while eliminating the need to evaluate complex, time-consuming, and less technically sound spacing waiver requests.

* *Docket 87-121* indicated that *waivers of the rule may be in the public interest in some instances*. PNBC's referral to Footnote 27 of the *Memorandum Opinion and Order* in MM Docket 87-121, *supra*, does not support the present waiver request. The footnote clearly refers to a *station seeking use of a multiplexed antenna located at the minimum cochannel or first-adjacent channel separation prescribed by § 73.215(e)*. In that context, a *station seeking use of a multiplexed antenna located at the minimum cochannel or first-adjacent channel separation prescribed by § 73.215(e)*, since it is difficult to multiplex a directional FM station with other nondirectional FM stations.²⁴ In any event, for the reasons explained below, we do not find that a grant of the requested waiver would serve the public interest.

While Docket 92-214, which adopted KNRK's Class C2 allotment, indicated that upgraded operation for that station would serve the public interest, that observation was general in nature since a larger station will almost always serve more people and there was nothing in the record to suggest there would be any adverse consequences. The rulemaking did not anticipate PNBC seeking a short-spacing of the magnitude proposed here. Since it has, we are compelled to consider the impact of the present waiver request (and future requests which invariably will cite this case as precedent) on our FM allocations scheme. The operation proposed for KNRK is a good example of what can be expected to occur when cochannel and first-adjacent channel stations are crowded together. To attain Class C2 operation, KNRK must significantly suppress radiation in two large areas to the northwest and southeast, to the point that greater suppression is required than is presently the case for KNRK's Class C3 operation.²⁵ *Nor does KNRK gain any significant service in these directions as compared to the present directional Class C3 operation.* Thus, we observe that permitting such waivers would encourage other applicants to seek operations which do not comply with our rules in exchange for marginal gains in service.²⁶ Finally, we note that the Commission has elsewhere denied a request for waiver of the spacing rules where increased coverage was the primary justification.²⁷ Therefore, we do not believe that the public interest is satisfied by the present PNBC proposal.

CONCLUSIONS

In these times of shrinking government resources, it is not an efficient use of the Commission's limited staff resources to allow new filings based on an inherently inefficient spacing waiver process. As we noted above, the

contour protection rule was adopted in part to eliminate the inefficiencies associated with the former spacing waiver process. With the Audio Services Division currently processing in excess of 1000 FM construction permit applications per year, and with these applications steadily increasing in difficulty as the FM band fills up, we see a justification in needlessly complicating and slowing the application process for substandard operations.

PNBC's showings have amply demonstrated that there is no fully spaced transmitter site (including the reference coordinate site) which complies with the minimum separation requirements of § 73.207 and at which a Class C2 operation could be constructed. It also appears that PNBC has been unable to find a suitable site which complies with the separation requirements of § 73.215(e). *Additional 12 km. of spacing that § 73.215(e) requires was compared to § 73.207. These facts suggest that the Channel Allotment adopted by Docket 92-214 was incorrect that a short-spaced transmitter site is necessary to the allotment can be used.* A substandard allotment is not a compelling basis for waiver of the Commission's technical rules covering construction permit applications. *Cf. Chesapeake and Wedgefield, SC, recon. denied, 4 FCC Rcd 4503 (1989); review denied, 5 FCC Rcd 5572 (1990).* Nor do we find that the other factors cited by PNBC (additional population served, reduction in existing prohibited contour overlap with KMGE) serve the public interest more than adherence to our technical rules. Consequently, the appropriate action under these circumstances is deletion of the substandard allotment. *See Pinckneyville, Illinois, 41 RR 2d 4 (1977); Natchitoches, Louisiana, 52 RR 2d 1588 (1983); Pine Knoll Shores, NC, 60 Fed. Reg. 64348 (December 15, 1995).* Accordingly, this matter is being referred to the Bureau's Allocations Branch for appropriate action.

FINAL ACTIONS

We have afforded the requests for waiver of § 73.215(e) the "hard look" called for under *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), but find that the facts and circumstances presented in the applicants' justifications are insufficient to establish that grant of the requested waiver would be in the public interest. Accordingly, the request for waiver of 47 CFR § 73.215(e) made by Pacific North West Broadcasting Corporation (KNRK) IS HEREBY DENIED. In addition, pursuant to Paragraph 22 of the *Report and Order* in MM Docket 91-347, 7 FCC Rcd 5074 (1992) since the applications requested waiver of a rule but the waivers were denied, these applications may not be amended to rectify the deficiencies. Therefore, application BPH-940829IC IS HEREBY DISMISSED as unacceptable for filing.

²⁴ Were a nondirectional contour protection station to locate on a multiplexed antenna located at the minimum cochannel or first-adjacent channel separation prescribed by § 73.215(e), that station would be limited to approximately the maximum facilities for the next lower class of station.

²⁵ Thus, where a nondirectional maximum Class C2 60 dBu service area is approximately 78% larger than a maximum Class C3 operation, KNUZ would increase its proposed service area by only 29%.

²⁶ For example, PNBC referred to its difficulties in obtaining a

suitable site for Class C3 operations in its previous application, BPH-880310MB, BPH-920216ED, and BPH-920831IH. *PNBC should not have been unaware that the Class C2 operation proposed in Docket 92-214 could face similar problems.* *Musicast of the South, Inc., 45 RR 2d 1232 (1976) six mile 9.4 km. short-spacing requested and denied.*

²⁷ Not only was the proposed allotment site unsuitable for broadcast operation at the time this application was filed, it appears that the allotment reference site was unsuitable even prior to the adoption of the upgraded allotment.

Sincerely,

Dennis Williams
Assistant Chief,
Audio Services Division
Mass Media Bureau

cc: Radio Station KNRK
McClanathan and Associates, Inc.
John Karousos, Chief, Allocations Branch

1000 FM PERMIT REQUESTS

Before the
Communications Commission
Washington, D.C. 20554

M Docket No. 86-144

Cal Parameters for
Classes of Part 73,
Broadcast Stations

ADJUDICATORY OPINION AND ORDER

1988; Released: April 29, 1988

on:

INTRODUCTION

This case has before it two petitions for reconsideration of the Commission's Second Report and Order (Second Report) proceeding. One petition, filed by Brown Broadcasting Service, Inc. on November 5, 1987, requests reconsideration and modification of the Commission's action in Section 73.213 of the rules, which governs the grandfathered short-spaced stations. The other petition, filed by Eric R. Hilding on September 25, 1987, requests that the Commission modify its action that amended Section 73.211, which sets forth power and antenna height requirements for each of the six classes of FM stations. Petitions were filed in response to either

BACKGROUND

This proceeding with a Notice of Proposed Rulemaking (Notice) that proposed minor adjustments that were affected by our actions in 80-90¹, but were not given detailed treatment in the Notice. We also proposed a method for classifying FM stations and technical rules that needed updating. Over 100 parties filed comments or reply comments to the Notice. In January 1987, we issued our Second Report and Order² resolving two of the issues. Subsequently, in September 1987, we issued our Third Report and Order³ addressing the remaining issues. In the Third Report, we set forth a definitive method for classifying FM stations according to their effective radiated power (ERP) and antenna height above average terrain (HAAT). Also, we amended our rules to limit modifications of grandfathered short-spaced stations, allowing only those that would not result in interference.

ISSUES

1. *The Brown Petition.* Brown Broadcasting Service, Inc. (Brown) is the licensee of station WBRU, Channel 23.8, Providence, Rhode Island. WBRU is a commercial station staffed primarily by students at Brown University. WBRU is also a grandfathered short-spaced station,⁴ and thus is subject to Section 73.213 of the Commission's rules, which governs modifications and relocations for these stations. Brown claims that WBRU would be adversely affected by the Commission's revision of that section of the rules.

5. Brown states that it is in the middle of an extended process to obtain a new tower site. At the new site, Brown believes that WBRU would be able to operate with 50,000 watts effective radiated power. Brown fears that new amended Section 73.213 will prevent WBRU from moving to this new site because, in effect, the amended rule limits each grandfathered short-spaced station to the predicted coverage (in the direction of other grandfathered short-spaced stations) which that station actually had on the effective date⁵ of the Second Report. On this date, WBRU was operating with a lower power (20,000 watts) at what it considers to be a temporary site.⁶ Brown does not want WBRU's coverage to be limited in the future to the coverage provided by the lower power at the temporary site. As a remedy, Brown requests that the Commission's action that amended Section 73.213 be modified to permit any grandfathered short-spaced station to be authorized for facilities that would produce predicted coverage equivalent to either: (1) the maximum predicted coverage that could have been authorized under the old rule; or alternatively, (2) the maximum predicted coverage from a site that is not short-spaced.

6. *Discussion.* Prior to the Second Report, Section 73.211 allowed licensees to routinely modify or relocate grandfathered short-spaced stations, even if the potential for interference were increased as a result. In the Second Report, we affirmed our contention that licensees of grandfathered short-spaced stations have had sufficient time (2 years) to relocate and optimize their facilities under the relatively liberal provisions of the old rule. We found that continuing to allow relocations and modifications that increase the risk of interference is not in the public interest and is counter to our objective of promoting efficiency in the use of the spectrum. We therefore amended the rule to allow only relocations and modifications that will not increase predicted interference. We also reaffirmed and expanded our policy of accepting for consideration agreements between grandfathered short-spaced stations that would permit increases in both facilities.⁷

7. Brown did not present any evidence to demonstrate that any grandfathered short-spaced station other than WBRU has or anticipates a similar problem; that is, operation at an interim location on the effective date of our action. No comments were filed by other grandfathered short-spaced stations in support of Brown's petition. We are not aware of any grandfathered short-spaced station other than WBRU that would be significantly affected by our action in the Second Report. Therefore, we must conclude that Brown's situation, if not unique, is rather uncommon.

8. Tailoring Section 73.213, which affects all grandfathered short-spaced stations, to fit circumstances peculiar to one particular grandfathered short-spaced station would not be good public policy.⁸ Because Brown's situation with regard to the site for WBRU appears to be an individual problem, any relief that may be necessary

would be more appropriately considered in the context of a request for a waiver of Section 73.213, rather than through any further amendment of that rule.⁹

9. Even if additional grandfathered short-spaced stations were affected in a manner similar to WBRU, we would not amend Section 73.213 of our rules in either of the ways that Brown suggests. The first alternative¹⁰ that Brown offers would, in effect, reinstate the old rule and undermine our purpose in changing the rule in the Second Report, namely, to prevent further increases in interference resulting from modifications and relocations of grandfathered short-spaced stations. The other alternative suggested by Brown¹¹, if made a rule, would be implemented by licensees largely through the use of directional antennas. As we are currently considering in a broader context the possibility of permitting short-spaced operation through the use of directional antennas,¹² we will not entertain Brown's less comprehensive suggestion here. For all of the foregoing reasons we will deny Brown's petition.

10. *The Hilding Petition.* Eric R. Hilding (Hilding), in his petition, states that Section 73.211, as amended by the Second Report, excludes Class A FM stations from "the benefit of certain reference distance considerations", and claims that this exclusion prevents Class A FM stations from utilizing relatively high (and therefore desirable) antenna locations. To illustrate this, Hilding provides a hypothetical account of a Class A FM station with access to a site that would provide an antenna HAAT of 639.5 meters. He states that the hypothetical Class A station would need to operate with an ERP of 65 watts at this site in order to provide full Class A coverage, but that "such operation would not be permitted pursuant to Section 73.211(a)(3)."¹³ Hilding concludes that the hypothetical Class A station could not use the site.

11. For relief, Hilding requests that the Commission modify its action that amended Section 73.211 by adding another paragraph to that section. The additional paragraph Hilding provides would expressly permit any Class A station, regardless of its HAAT, to operate with less than 100 watts, provided that the resulting reference distance equals or exceeds that of a Class A station operating with minimum facilities.¹⁴ Hilding further requests that a reference to this additional paragraph be added to paragraph 73.211(b)(2).

12. *Discussion.* Section 73.211 does not preclude a Class A FM station from using any desired antenna site, regardless of the elevation or the resulting antenna HAAT.¹⁵ Therefore, the hypothetical station in Hilding's example would not be prevented by Section 73.211 from using the 639.5 meter HAAT antenna site.

13. Hilding does raise a good point, however. Section 73.211 as it now stands does treat Class A stations differently than stations of the other classes in this respect -- Class A stations at very high antenna sites must provide the full maximum Class A coverage,¹⁶ whereas Class B1, B2, C1 and C stations need only provide more coverage than the full maximum coverage of the next lower class.¹⁷ In the particular paragraph (§73.211(a)(3)) that states this, Class A stations were excluded because there is no lower class to establish a minimum coverage requirement for Class A stations.

14. We find that Hilding's suggestion to use Class A minimum facilities as the lower boundary for Class A coverage is reasonable and appropriate. Accordingly, we will amend Section 73.211 to permit any Class A station to have an ERP less than 100 watts, provided that the

reference distance equals or exceeds 6 kilometers. See footnote 16 *supra*. Rather than adding a new paragraph, we are appending the appropriate language to paragraph 73.211(a)(3). See Appendix.

OTHER MATTERS

15. The rule amendment contained herein has been analyzed with respect to the Paperwork Reduction Act of 1980 and found to contain no new or modified form, information collection and/or record keeping, labeling, disclosure, or record retention requirements, and it will not increase or decrease burden hours imposed on the public.

16. Because the rule amendment we are adopting herein is a substantive rule which grants an exemption and relieves a restriction, we are designating that it shall become effective immediately upon publication in the Federal Register.¹⁸ Applications pending or received on or after September 25, 1987 (the release date of the Second Report) may be processed in accordance with the newly amended rule.¹⁹

ORDERING CLAUSES

17. Accordingly, IT IS ORDERED, That the Petition for Reconsideration filed by Brown Broadcasting Service, Inc. IS DENIED, and That the Petition for Reconsideration filed by Eric R. Hilding IS GRANTED.

18. IT IS FURTHER ORDERED That Part 73 of the Commission's Rules and Regulations IS AMENDED, as set forth in the Appendix below, effective upon publication in the Federal Register. Authority for this action is contained in Sections 4(i) and 303(r) of the Communications Act of 1934, as amended.

FEDERAL COMMUNICATIONS COMMISSION

H. Walker Feaster, III,
Acting Secretary

APPENDIX

47 CFR Part 73 is amended as follows:

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154 and 303.

2. Section 73.211 is amended by revising paragraph (a)(3) to read as follows:

§ 73.211 Power and antenna height requirements.

(a) * * *

(3) Stations of any class except Class A may have an ERP less than that specified in paragraph (a)(1) of this section, provided that the reference distance, determined in accordance with paragraph (b)(1)(i) of this section,

exceeds the distance to the class contour for the next lower class. Class A stations may have an ERP less than 100 watts provided that the reference distance, determined in accordance with paragraph (b)(1)(i) of this section, equals or exceeds 6 kilometers.

FOOTNOTES

¹ 2 FCC Rcd 5693 (1987), released September 25, 1987.

² 104 FCC 2d 160 (1986).

³ *Report and Order*, 94 FCC 2d 152 (1983); *recon. granted in part and denied in part*, 97 FCC 2d 279 (1984). The Commission amended the FM broadcasting rules to accommodate more stations by increasing the number of station classes.

⁴ 2 FCC Rcd 660 (1987). The Commission amended the rules to permit any class of station to be allotted on 20 channels that were previously reserved for Class A operation. Also, the Commission declined to remove a rule section that provides for the classification of stations by zone based on transmitter location rather than the location of the community of license.

⁵ Grandfathered short-spaced stations are FM stations at locations authorized prior to November 16, 1964 (when the Commission began using the distance-based allotment and assignment method) that did not meet the separation distances required by §73.207 and have remained short-spaced since that time. These stations are allowed to continue to operate at or near their 1964 locations even though these locations do not comply with current interstation distance separation requirements.

⁶ The effective date of the *Second Report* was November 9, 1987.

⁷ §73.213, as amended, permits modification or relocation of any grandfathered short-spaced station provided that the station's predicted 1 mV/m field strength contour is not extended toward the predicted 1 mV/m field strength contour of any other grandfathered short-spaced station.

⁸ WBRU has been operating at this site with an ERP of 20,000 watts for more than 10 years.

⁹ If the Commission finds that the public interest would be served by a mutual increase in the facilities of two or more grandfathered short-spaced stations pursuant to the terms of such an agreement, Section 73.213 may be waived to permit the increase. However, this policy does not apply to site relocations. See *Public Notice*, FCC 75-1367, dated December 15, 1975, 57 FCC 2d 1263 (1975); 40 Fed. Reg. 58893, December 19, 1975, codified in §73.4235 of the Commission's rules. See also *Public Notice*, released September 25, 1987, 2 FCC Rcd 5701 (1987), which extended the policy to encompass agreements with grandfathered short-spaced stations on the second and third adjacent channels.

¹⁰ Rules adopted in a generic rule making are of general applicability and do not consider the special circumstances of individual parties. The rule making process contemplates the subsequent consideration and possible grant of rule waivers for good cause shown in specific cases where unique or unusual circumstances obtain, or to remedy unintended hardships occasioned by our rules. See *WAT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

¹¹ Brown has pending an application (BPH871106IU) that requests an increase in power to 50,000 watts and a site relocation. This application was filed three days before the effective date of the *Second Report*, and therefore can be processed in accordance with the old §73.213. If this application is granted, Brown will gain the relief it seeks in the instant petition. If the application is

not granted, Brown has the option of requesting, with the appropriate public interest showing, a waiver of the newly amended §73.213. The Commission does not here evaluate or rule on the merits of any future relocation of WBRU. Rather, the Commission's decision in this *Memorandum Opinion and Order* is based primarily on the inappropriateness of amending a rule affecting an entire group of licensees solely in response to the concerns of one licensee in that group.

¹² Under this alternative, grandfathered short-spaced FM stations could be modified or relocated in any way that would produce a predicted contour matching the predicted contour of short-spaced facility that could have been authorized under the old rule.

¹³ The second alternative suggested by Brown is to permit modification or relocation of a grandfathered short-spaced FM station that would produce a predicted contour that matches the predicted contour of hypothetical facility at a non-short-spaced site. This is essentially the concept of "equivalent protection".

¹⁴ See *Notice of Proposed Rule Making* in MM Docket 87-12 (FCC 88-73, released March 30, 1988). For additional background, see *Notice of Inquiry* in MM Docket 87-121, 2 FCC Rcd 3141 (1987). The Commission has requested comment as to the feasibility of the use of directional antennas to permit short-spaced operation by any FM broadcast station, not just the grandfathered ones affected by §73.213.

¹⁵ Hiding implies (although he does not explicitly state) in paragraph 73.211(a)(3), which was added to the rule in the *Second Report*, prevents Class A stations from reducing power below 100 watts pursuant to paragraph 73.211(b)(2), in effect limiting Class A stations to a maximum HAAT of 525 meters (1722 feet).

¹⁶ The minimum facilities for a Class A FM station are considered to be 100 watts ERP with an antenna HAAT of 30 meters. This combination produces a reference distance of 6 kilometers.

¹⁷ The rules permit operation of a Class A FM broadcast station with any antenna HAAT. However, with an antenna HAAT greater than the Class A reference HAAT (100 meters), the station's ERP must be lower than the 3,000 watt class maximum such that the resulting reference distance does not exceed 24 kilometers. For a HAAT of 639.5 meters, the example Hiding uses, §73.211(b)(2) does indeed limit a Class A station to 65 watt ERP, but such operation is not prohibited by §73.211(a)(3), Hiding claims.

¹⁸ A reference distance of 24 kilometers constitutes full coverage for a Class A FM broadcast station. As of January 1987, there are 10 Class A stations that have an antenna HAAT greater than 525 meters. Eight of these are providing full coverage. See footnote 15 *supra*.

¹⁹ Before the *Second Report*, all FM stations at very high antenna sites were required to provide the full maximum coverage for their class. However, the Commission found it necessary to allow stations the option to provide less than full coverage in order to facilitate classification of FM stations and to provide continuous range of permissible facilities. See paragraph 14 in the *Second Report*.

²⁰ See 5 U.S.C. 553(d).

²¹ The restriction removed herein was an unintended effect of the Commission's action in the *Second Report*. Applying the newly amended rule to the processing of applications pending received on or after the release date of that decision will eliminate any hardship that may have resulted.

Before the Federal Communications Commission Washington, D.C. 20554

MM Docket No. 88-114

In the Matter of

Review of Technical and Operational
Regulations of Part 73, Subpart E,
Television Broadcast Stations

NOTICE OF PROPOSED RULE MAKING

Adopted: March 9, 1988;

Released: April 29, 1988

By the Commission: Commissioner Dennis issuing a separate statement.

INTRODUCTION

1. The Commission is initiating this proceeding to review technical and operational requirements of Subpart E of Part 73 of the Commission's Rules for television broadcast stations. The intent of this proceeding is to delete such regulations that may be unduly burdensome or outdated, and may no longer be needed. This *Notice of Proposed Rule Making (Notice)* considers only the elimination of rules relating to the technical operation of television broadcast facilities. This action continues the Commission's deregulatory review of technical regulations as initiated by General Docket No. 83-114, *A Re-Examination of Technical Regulations*, 99 FCC 2nd 903 (1984). As a result of that proceeding, the Commission conducted a series of Rule Making actions in which many of the technical regulations were deleted if they were determined to be prescriptive of outdated or unwarranted specifications.¹ Also, regulations that required stations to meet certain signal quality performance levels were eliminated in favor of allowing competitive marketplace incentives to influence the quality of the signal to the listening and viewing public. However, those regulations which act to control interference among stations have been appropriately maintained. Rules in the following areas are considered in this proceeding:

- (1) Separate operation of TV aural and visual transmitters.
- (2) Power meter calibration.
- (3) Color burst signal requirement.
- (4) Antenna radiation pattern limitations.
- (5) Equipment installation and safety specifications.
- (6) Reference table for conversion of minutes and seconds to decimal parts of a degree.

ISSUES

Separate operation of TV aural and visual

2. Television program signal transmission component and its associated or "integrated" produced with separate visual and aural components. However, licensees may also transmit non-associated video and audio program flows for the broadcasting of aural programs without visual displays, or visual information with or without sound. Such service might only programming of news, weather, and other reports. Prior to 1980, the separate audio and video transmitters had been permitted only in certain situations, such as pattern transmissions, equipment testing, etc. In 1980 the Commission permitted audio or video service. At that time, the Commission was concerned that broadcasters might over-rely on service by augmenting their program day or video bulletin board-like informational of normal programming during regular hours. Thus, the Commission specified the hour 12 midnight until 6 A.M. because these common "dark" or unused hours for stationing 24 hours per day.² Recognizing, however, that stations sign-on after 6 A.M., particularly commercial educational stations, the Commission deleted these stations to broadcast an informational service for no more than 15 minutes prior to the start of the station's scheduled programming.

3. The essence of the Commission's action to allow an additional service to be offered hours where no "regular" television service by the station. However, by specifying the off-day and the 15-minute limit for stations after 6 A.M., the Commission restricted the flexibility of using the informational service course of regular broadcast hours. We believe the public interest would be better served by licensee maximum flexibility to establish a time of day that is most appropriate for its rate audio or video services. For instance, communities where certain news or sports reports, e.g., farm crops index reports, may be of public benefit at certain times of the day. Rather than broadcasting such information on-air, stations could elect to report more cost effectively via a video board-like service. In general, we believe the pressures from competing stations and the need to create incentives for broadcasters to develop regular integrated sound and video programming or to transmit non-associated informational services, depending upon the desires of their viewers. In our analysis, we found no basis for not allowing licensees to make this judgment in the competitive limits of their individual broadcast areas. Therefore, we propose to amend §73.653 to eliminate all time restrictions for the transmission of video informational services.

Power meter calibration.

4. In operating a television broadcast station, licensees must have the capability of determining the appropriate level of authorized transmission

all times. In using the "direct method" for determining the station's visual power level under Section 73.663(b)(3), a transmission line meter that must be calibrated at least once every six months should be used.⁴ The Rule also states, however, that such meter calibrations should be done as often as may be necessary to insure compliance with the power limitations.

5. The Commission believes that the 6-month calibration requirement may be excessive for some stations and may be inadequate for others, depending on the age of a station's equipment. For example, the newer state-of-the-art test equipment maintains its accuracy over long periods and does not require as frequent recalibration. For stations using such equipment, a 6-month calibration requirement may be excessive and unwarranted. Even for stations using older test equipment, which may need more frequent calibration, the requirement also may not be necessary in view of the overriding requirement to perform calibrations as often as necessary to ensure compliance with the power limitation. In view of this overriding requirement, we believe that we can rely on the broadcaster to ensure proper technical operation of its station. When this is insufficient, Commission enforcement of the necessary calibrations is available. Therefore, we propose to delete the requirement in Section 73.663(b)(3) that the transmission line meter be calibrated at intervals not to exceed 6 months.⁵

Color burst signal requirement.

6. The TV transmission standards in our Rules describe the specific characteristics of the broadcast television signal to be transmitted within the assigned 6 MHz channel. Among this body of standards, Section 73.682(a)(9)(ii) states that color transmission shall comply with the synchronizing waveform specifications in Figure 6 of Section 73.699. Note 8 of Figure 6 specifies that "color burst" signals are to be omitted during monochrome (black and white) transmission.⁶ In 1976, the Commission reaffirmed and clarified the application of this requirement.⁷ Since that time, however, broadcasters and cablecasters have found certain video tape processing equipment to have operational disadvantages in omitting the color burst signal when transmitting a black-and-white video signal. Modern video equipment technology now utilizes the color burst signal for more than its original purpose of transmitting color reference information. The popular types of video processing equipment, used almost universally, rely on the color burst for timing and synchronization information to correct video signal stability or timing errors. And thus, some units are designed so as to require the color burst signal for proper operation, e. g., in the video tape editing process. Consequently, some broadcasters on some occasions have requested and received waivers of this requirement.⁸

7. The requirement to omit the color burst signal was adopted in 1953 when color television receivers had relatively unsophisticated circuitry (compared to today's state-of-the-art receiver), which sometimes resulted in an inferior picture when receiving a black-and-white transmission containing color burst signals.⁹ If not working properly, the color circuitry in these older model receivers was sometimes activated during the reception of a black-and-white transmission containing color burst signals. The activated circuits would cause picture degradation in the form of "colored snow or confetti" (visual random noise), or other distortion effects. It is our understanding that

modern receiver design has minimized this problem, and that, other than on older model sets (prior 1980 vintage), it only occurs on those sets in fringe areas receiving weak signals.¹⁰ Even so, some of the current literature indicates that the color burst signal level must be significantly reduced or suppressed, so that the "color killer" circuitry in today's receivers might be activated to cut off the color circuitry during the reception of black-and-white transmissions.¹¹ That observation notwithstanding, it has nevertheless been suggested that current technology has largely obviated the need for the color burst omission standard, referenced above, and that compliance with the requirement has become increasingly burdensome.

8. It also has been suggested that the current rule creates production problems and expenses in corrective video editing. For instance, the design of some videotape machines requires that a color burst signal, if absent, first be added to a program tape before the machine will be able to properly edit the tape. Then, in order to broadcast the material in accordance with the current rule, the inserted color burst signal must be deleted after editing is completed. Thus, two additional steps and, in most cases, an additional piece of equipment are required to comply with the color burst omission rule. In addition, this two-step process can degrade the quality of the picture as a result of unavoidable timing signal errors.

9. It is also noted that broadcast programs with no color burst can cause serious video signal timing and synchronization problems in cable television retransmissions. The cable television industry in retransmitting broadcast programming is using more frequently equipment known as frame synchronizers that rely on the presence of color burst for timing. If not properly adjusted via the color burst signal, these frame synchronizers will sometimes create a transmission without such color burst as defective. The apparent result to the cable operator is the functional equivalent of a transmitter failure at the broadcast station. This is an undesirable condition for those broadcasters that are providing their signal for cable TV distribution.

10. We note that the color burst omission requirement is a quality control regulation and does not pertain to adjacent or co-channel interference control. Thus, the elimination of this rule would be consistent with the Commission's regulatory policy that decisions concerning picture quality should properly be left to the broadcast licensee.¹² Although elimination of the requirement would lead to some measure of picture degradation for some viewers, particularly in older model receivers or in areas where reception is marginal, we believe that in instances in which the broadcaster chooses to retain the color burst signal during black-and-white programming, and this results in audience complaints, the broadcaster will be responsive to its audience in the station's best interest. Thus, we are confident that the broadcaster would strike what we believe is the most appropriate balance between the consumers' demands for the highest quality signal and the demands to operate its video tape processing and other equipment in the most efficient manner. Therefore, we propose to delete the requirement of Note 8 of Figure 6 of Section 73.699 that the color burst signal be omitted during the transmission of monochrome programming.¹³

Antenna radiation pattern limitations.

11. Depending on the location of a television station transmitter, use of a directional antenna system may be more beneficial to the station and to viewers, than

nondirectional antenna. While not authorized routinely, directional antennas may be used for the purpose of improving service upon an appropriate showing of need. See Rule Section 73.685 (e).

12. When television broadcasters use directional antenna systems, one of our regulations restricts the ratio of the maximum radiated power at any point in the horizontal radiation pattern to the minimum radiated power at any other point in that pattern. This regulation was intended to prevent the use of antennas whose patterns had areas of extreme suppression (or nulls), and were unpredictable and unstable. Use of such antennas would have led to ghosting problems within the null areas. Rule Section 73.685(e) specifies that directional antenna horizontal radiation patterns for stations operating on VHF channels must not have nulls that exceed a 10 dB maximum-to-minimum ratio. It also specifies that UHF stations operating with more than 1.0 kW of video transmitter output power must not employ a directional antenna whose radiation pattern has nulls that exceed 15 dB. (UHF stations operating with 1 kW or less are not so limited.) The Commission adopted these limits because it concluded that nulls greater than -10 dB and -15 dB for VHF and UHF, respectively, may not be practicable because of signal reflections from the strong main lobe into the weaker null areas.¹⁴ On many occasions, however, broadcasters have requested waivers to exceed the specified maximum-to-minimum ratio for their radiation patterns. In several instances, the Commission has granted such waiver requests. For example, broadcasters have been allowed to adjust their signal radiation patterns exceeding these limits so as not to waste power over large bodies of water within their coverage areas. In other instances, we have granted waivers to avoid excessive signal radiation toward the face of a hill or mountain, which could reflect the signal and cause picture "ghosting" image degradation. We are not aware of significant problems as a result of our granting such waivers.

13. We now believe the maximum-to-minimum requirement can be eliminated. The state-of-the-art in antenna design has progressed since the time when the current limits were originally proposed in a Notice on July 11, 1949 (see para. 215 in the *Sixth Report and Order*). By now, advances in antenna design have provided for increased accuracy in predicting and attaining the desired suppression in directional antennas. Therefore, we propose to delete the maximum-to-minimum ratio limitations described in Rule Section 73.685(e).¹⁵

Equipment installation safety specification

14. Rule Sections 73.687(d), (e), (f), and (h) contain requirements for the construction and installation of transmission systems and studio equipment, and other safety procedures. The Commission's safety requirements were written years ago when many broadcasters designed and built their own facilities. Today, nearly all broadcasters acquire their transmission system equipment from manufacturers that must meet the safety requirements such as the National Electrical Code imposed by other regulatory agencies. In addition, much of this equipment is tested for safety by independent laboratories, e. g., Underwriters Laboratories (UL). Moreover, we believe that broadcasters have strong incentives to install safe equipment in order to minimize the possibility of any harm to their employees.

15. Section 73.687 also contains specific equipment and the electrical properties of equipment. Many of these requirements are also not for the reasons mentioned above. Also, and safety specifications do not pertain to, or limits on, adjacent and co-channel which are of paramount Commission concern. Such specifications are analogous to those eliminated in similar proceedings for AM and FM. It is our view that these requirements pertain to equipment installation and safety are redundant of other state or federal requirements.¹⁶ Therefore, that the installation and safety requirements of Section 73.687(d), (e), (f), and (h) may be unwarranted, we propose their removal.

Reference table of minutes and seconds small parts of a degree.

16. Table I of Rule Section 73.698 contains values for minutes-to-decimal and seconds-to-decimal degree. These values may be used in geographical distance separations between channel assignment locations. Such conversions established in the Rules to provide the most accurate calculations long before the widespread availability of electronic calculators. At that time, approximations and estimates made in determining such values using other manual methods. On occasion, these yielded imprecise and inconsistent results. Electronic calculators and computers are today for calculating coordinate distance increased accuracy and speed of computation no longer needed. Therefore, we propose to delete Section 73.698 from the Rules.¹⁶

CONCLUSION

17. In this proceeding, we have reviewed rules that we believe to be unnecessary, anachronistic. We encourage all interested parties to comment not only on the specific proposals but also to comment on other related technical issues within the scope of this proceeding.

18. Authority for this proposed rule making is found in Sections 1.3, 4(i) and (j), 303, 308, 309 of the Communications Act of 1934, as amended. Applicable procedures set forth in Section 1.3 of the Commission's Rules, interested parties may comment on or before June 20, 1988, on the proposed rule making. All relevant comments will be considered by the Commission. The final action is taken in this proceeding. In making its decision, the Commission may take into consideration information and ideas not contained in the written comments or a written statement of such information and ideas. The public file, and provided that the fact of the Commission's reliance on such information is noted.

19. For purposes of this non-restricted rule making proceeding, members of the public are advised that *ex parte* presentations are prohibited during the Sunshine Agenda period. See 1.1206(a). The Sunshine Agenda period begins at the time which commences with the release of a matter has been placed on the Sunshine Agenda.

when the Commission (1) releases the text order in the matter; (2) issues a public notice in the matter has been deleted from the record; or (3) issues a public notice stating that the matter has been returned to the staff for further review. Whichever occurs first. Section 1.1202(f), this Agenda period, no presentations, *ex parte*, are permitted unless specifically re- mission or staff for the clarification or den- dence or the resolution of issues in the on 1.1203.

an *ex parte* presentation is any presenta- tion of the merits or outcome of the proceeding by any person who (1) if written, is submitted to the Commission's Secretary for public record. Any person who makes an oral presentation that presents data or arguments cited in that person's previously-filed writ- must provide, on the day of the oral pre- torandum to the Secretary (with a copy to the staff member involved) which sum- and arguments. Each *ex parte* presenta- above must state on its face that the is served, and must also state by docket eeding to which it relates. Section 1.1206. ed by Section 603 of the Regulatory Flexi- Commission has prepared an initial regula- analysis (IRFA) of the expected impact of policies and rules on small entities. The rth in Appendix A. Written public com- ments on the IRFA. These comments must dience with the same filing deadlines as e rest of the Notice, but they must have a distinct heading designating them as e regulatory flexibility analysis. The Secretary copy of this Notice, including the initial bility analysis to be sent to the Chief Coun- y of the Small Business Administration in Section 603(a) of the Regulatory Flexibil- No. 96-354, 94 Stat. 1164 5 U.S.C. Section 12).

osals contained herein have been analyzed the Paperwork Reduction Act of 1980 and in no new or modified form, information or record keeping, labeling, disclosure, or n requirements; and will not increase or n hours imposed on the public. ormally in this proceeding, participants must d five copies of all comments, reply com- porting documents. If participants want ioner to receive a personal copy of their original plus eleven copies must be filed. d reply comments should be sent to Office ry, Federal Communications Commission, D.C. 20554. Comments and reply comments le for public inspection during regular busi- the Dockets Reference Room (Room 239) of munications Commission, 1919 M Street, gton, D.C. 20554.

her information on this proceeding, contact en, Mass Media Bureau, (202) 632-9660.

FEDERAL COMMUNICATIONS COMMISSION

H. Walker Feaster, III
Acting Secretary

APPENDIX A

INITIAL REGULATORY FLEXIBILITY ANALYSIS

I. Reason for action

The reason for this review is to determine the relevance of current Commission rules concerning television broad- cast transmission quality in light of expanding marketplace competition and to consider whether these rules should be revised or eliminated. This review also considers the elim- nation of television broadcast facility safety rules which may be enforced more appropriately by other agencies.

II. The objective

This action is proposed to delete unnecessary or out- dated rules and policies and allow television broadcast licensees to operate their stations with increased flexibility and less burdensome technical regulations.

III. Legal basis

The legal basis for the Commission's engaging in rule- making is contained in Sections 4(i) and (j) and 303(r) of the Communications Act of 1934, as amended.

IV. Description, potential impact, and number of small entities affected

There are 1,005 commercial television stations, and 35 noncommercial television stations in the United States. All of these stations should benefit from this proposal by being allowed increased flexibility and being relieved of burdensome regulations. We expect no negative impact on these stations, small entities or large, as we are not mandating any new requirements or showings. Interference should not increase as a result.

V. Recording, Recordkeeping, and Other Compliance Requirements

There is no additional impact.

VI. Federal Rules which Overlap, Duplicate, or Conflict with the Proposed Rules

There is no overlap, duplication, or conflict.

VII. Any Significant Alternatives Minimizing Impact on Small Entities And Consistent With Stated Objective

There are no alternatives available.

APPENDIX B

Part 73 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

1. The authority citation for Part 73 would continue to read as follows:

Authority: 47 U.S.C. 154 and 303.

2. Section 73.208 is proposed to be amended by remov- ing paragraphs (c)(1)(i) and (ii) and revising paragraph (c)(1) to read as follows:

§ 73.208 Reference points and distance computations.

(c) ***

(1) Convert the latitudes and longitudes of each refer- ence point from degree-minute-second format to degree- decimal format by dividing minutes by 60 and seconds by 3600, then adding the results to degrees.

3. Section 73.653 is proposed to be revised to read as follows:

§ 73.653 Operation of TV aural and visual transmitters.

(a) The aural and visual transmitters may be operated separately to present different or unrelated program mat- erial for the following purposes:

(1) Emergency fills due to either visual or aural equip- ment failures leaving the licensees with only the audio or video programming to announce the equipment failures to the audience;

(2) Equipment tests or experimentation pursuant to §73.1510 (Experimental authorizations) and §73.1520 (Operation for tests and maintenance).

(3) To present visual transmissions of a test pattern, still pictures or slides with aural transmission consisting of a single tone or series of variable tones, a presentation of the upcoming program schedule, aural news broadcasts, or music.

4. Section 73.663 is proposed to be amended by revising paragraph (b)(3) to read as follows:

§ 73.663 Determining operating power.

(b) ***

(3) The meter must be calibrated with the transmitter operating at 80%, 100%, and 110% of the authorized power as often as may be necessary to insure compliance with the requirements of this paragraph. In cases where the transmitter is incapable of operating at 110% of the authorized power output, the calibration may be made at a power output between 100% and 110% of the au- thorized power output. However, where this is done, the output meter must be marked at the point of calibration of maximum power output, and the station will be deemed to be in violation of this rule if that power is exceeded. The upper and lower limits of permissible pow- er deviation as determined by the prescribed calibration, must be shown upon the meter either by means of adjust- able red markers incorporated in the meter or by red marks placed upon the meter scale or glass face. These markings must be checked and changed, if necessary, each time the meter is calibrated.

5. Section 73.685 is proposed to be amended by revising paragraph (e) to read as follows:

§ 73.685 Transmitter location and antenna system.

(e) An antenna designed or altered to produce a noncir- cular radiation pattern in the horizontal plane is consid- ered to be a directional antenna. Antennas purposely installed in such a manner as to result in the mechanical beam tilting of the major vertical radiation lobe are in- cluded in this category. Directional antennas may be em- ployed for the purpose of improving service upon an appropriate showing of need.

6. Section 73.687, Transmission system requirements, is proposed to be amended by removing paragraphs (d), (e), (f) and (h), and redesignating paragraph (g) as paragraph (d).

7. Section 73.698, Tables, is proposed to be amended by removing Table I.

8. Section 73.699, Figure 6, is proposed to be amended by removing Note 8, and redesignating Notes 9 through 19 as Notes 8 through 18 respectively.

FOOTNOTES

¹ The Commission has earlier adopted the following similar actions in review of technical facilities and operational require- ments: Review of Technical and Operational Regulation of FM Broadcast Stations, Report & Order in MM Docket No. 85-325, 51 FR 17027, May 8, 1986; Review of Technical and Operational Regulations of AM Broadcast Stations, Report & Order in MM Docket No. 85-125, 51 FR 2704, January 21, 1986; Review of Technical and Operational Regulations of Cable Television Sys- tems, Report & Order in MM Docket No. 85-38, 50 FR 52162, December 24, 1985.

² "Integrated sound" pertains to the simultaneous transmission of video and aural signals representing a displayed scene and its related sound.

³ See §73.653, and *Report & Order*, BC Docket No. 80-10, 45 FR 63857, September 26, 1980, concerning *Operation of Visual and Aural Transmitters of TV Stations*.

⁴ The "direct method" of power determination for a television visual transmitter involves the measurement of power by direct measurement of the RF (radio frequency) output terminals of the transmitter.

⁵ The Commission deleted a similar mandatory 6-month equipment calibration requirement from the FM broadcasting rules for similar reasons. See *Report and Order*, BC Docket No. 82-537, 48 FR 38473, August 24, 1983, concerning *Operating and maintenance logs for broadcast and broadcast auxiliary stations*.

⁶ The "color burst" is a short series of 8 to 11 cycles of the color subcarrier frequency (3.576545 MHz). For color TV transmission, it is superimposed on a portion of each horizontal blanking signal. It is used to synchronize the receiver's color subcarrier oscillator with that of the transmitter so that the colors will be properly decoded by the receiver.

⁷ See *Omission of the color burst*, *Memorandum Opinion and Order*, 58 FCC 2d 385, adopted March 9, 1976. The Commission stated in paragraph 4, "By its terms, Section 73.699, Figure b, Note 8, requires that the color burst be omitted when any monochrome program material is broadcast. Because some receivers are slow to 'lock in' when the color burst is restored following a monochrome transmission, it is the Commission's policy that the color subcarrier need not be deleted during transmission of limited monochrome segments within a program which is fundamentally designed and intended to be broadcast in color. In no event should the color burst be transmitted during a program which is basically monochrome, such as a full length black and white motion picture, except during the actual time when it is desired to transmit local inserts, station identifications, or commercials in color."

⁸ On August 31, 1987, the Commission received a request by the Public Broadcasting Service (PBS) and the National Association of Public Television Stations (NAPTS) for a blanket waiver of the rules requiring omission of the color burst reference signal during monochrome television transmissions for all noncommercial educational stations. PBS/NAPTS further suggested that the Commission may wish to consider whether this requirement should be applied to any broadcaster, and consider issuing a declaratory order that eliminates the requirement for all broadcasters. Thus, in lieu of granting a blanket waiver as requested by PBS/NAPTS or issuing a declaratory order, we will address their concerns in this proceeding, thereby rendering their request moot.

⁹ See *Report And Order*, Rules Governing Color Television Transmission, in Docket No. 10637, 18 FR 8649, December 23, 1953.

¹⁰ The Electronic Industries Association (EIA) also has informally reported that, generally, receiver manufacturers prefer that the color burst omission requirement remain in the rules because it is an interoperability standard. That is, it is a standard to which manufacturers can design and build universal domestic receivers. They indicate that color receivers are not necessarily designed to be immune to monochrome picture degradation if the color burst signal is not omitted or at least significantly suppressed. On the other hand, the EIA and Association of Maximum Service Telecasters, Inc. (MST) have informally reported that broadcasters generally prefer the option of not omitting the color burst signal.

¹¹ For example, *Television Engineering Handbook* by K.B. Benson, 1985, states that "Most receivers . . . cut off the chroma channel transmission when the received burst level goes below

approximately 5 to 7 percent." This may suggest that a suppression of the color burst to a level of approximately 6 percent of signal may accomplish what a signal omission would. We solicit comments on the appropriateness of suppression to 6 percent of the level of the color burst signal during monochrome transmissions. Comments are also requested as to whether such suppression would be sufficient to accommodate the signalling function of the video tape processing equipment discussed in paragraph 9.

¹² See *A Re-examination of Technical Regulations*, *supra*. While the Rules have generally regulated the technical quality of the broadcast transmission signal, the Commission noted in that proceeding that it had never regulated the technical quality of the broadcast program signal. The Commission further recognized that the competition among broadcasters and certain other service providers was sufficient to regulate picture and sound quality. It noted that competitive market forces would create incentives for television stations to produce pictures and sound of a technical quality acceptable to viewers. The fear of losing audience to other stations would create strong incentives for stations to maintain technical quality of their sound and video in the absence of any government regulation.

¹³ We also seek comments as to what percentage of television receivers fall in the "older set" category and what percentage of the audience is located in areas with marginal reception. However, as suggested above, if the received picture signal is degraded as a result of continued color burst signal during the transmission of black and white programming, it should be reported to, and resolved by the particular broadcast station transmitting that signal, without Commission intervention.

¹⁴ Radio wave signal reflections in television systems can cause ghost images (picture degradation) on the receiver screen. See *Engineering Standards concerning Television Broadcast Service*, Sixth Report and Order in Docket No. 9175, 17 FR 3905, May 1, 1952 and *Expanded Use of UHF Television channels*, Second Report and Order in Docket No. 14229, 28 FR 3394, April 1, 1963.

¹⁵ While proposing to delete the maximum-to-minimum magnetic radiation restrictions, we also seek comments as to whether these restrictions should be relaxed rather than eliminated. If so, we seek further comments as to what level of radiation suppression should be permitted.

¹⁶ See *Reports and Order* in MM Docket Numbers 85-125, and 85-325, *supra* note 1.

¹⁷ These functions may be performed more appropriately by the Department of Labor's Occupational Safety and Health Administration (OSHA) or by local agencies. For instance, OSHA safety standards for high voltage equipment are detailed in Title 29, Part 1910 of the Code of Federal Regulations.

¹⁸ Section 73.208(c)(1) refers to Table I of 73.698 for calculating FM assignment distance separations. For the same reasons as given above, the conversion data in Table I is not needed for FM assignment distance calculations. Consequently, we also propose that the reference in Section 73.208(c)(1) to Table I in 73.698 be deleted.

SEPARATE STATEMENT OF COMMISSIONER PATRICIA DIAZ DENNIS

In Re: Review of Technical and Operational Regulation of Part 73, Subpart E, Television Broadcast Stations

The proposal to eliminate rules (Sections 73.698, 73.699, (f) and (h)) related to safety procedures and requirements for constructing and installing transmission systems and studio equipment troubles me. The commenters should focus upon the extent to which other agency regulations, state or federal, actually address the safety concerns our rules currently contemplate. Are these rules, in fact, "redundant" as the Notice of Proposed Rulemaking states, or do they provide necessary, additional safety guidelines? If these rules are outdated because they were written "years ago",¹ should we update them rather than totally eliminate them?

FOOTNOTE FOR STATEMENT

¹ Notice of Proposed Rulemaking at paragraph 14.

Before the
Federal Communications Commission
Washington, D.C. 20554

MM Docket No. 86-144

In the Matter of

Review of Technical Parameters
for FM Allocation Rules of Part 73,
Subpart B, FM Broadcast Stations

THIRD REPORT AND ORDER (Proceeding Terminated)

Adopted: February 15, 1989; Released: April 10, 1989

By the Commission: Commissioner Quello dissenting
and issuing a statement; Commissioner Dennis issuing a
separate statement at a later date.

INTRODUCTION

1. The Commission has under consideration the last of a number of proposed FM Broadcast technical rule revisions that became necessary as a result of the creation of three new station classes in BC Docket 80-90. This *Third Report and Order (Third Report)* amends Part 73 of the Commission's Rules to provide a uniform level of protection for FM receivers from intermediate frequency (IF) interference.¹ Specifically, we are adjusting the minimum distance separation requirements for IF-related FM stations² to prevent overlap of their predicted 36 mV/m median field strength contours, regardless of the classes of the two stations. Also, we are adding a new minimum distance separation requirement applicable only to FM Channel 253 (98.5 MHz) and TV Channel 6, based on this same protection criterion.³ We believe that these requirements constitute a reasonable standard that will preclude only those channel allocations and station assignments likely to result in IF interference.

BACKGROUND

2. The Commission initiated this proceeding in 1986 by adopting a *Notice of Proposed Rule Making (Notice)* proposing to refine certain rules that were affected by its previous action in BC Docket No. 80-90,⁴ but were not given detailed consideration in that proceeding.⁵ In 1987, we adopted a *First Report and Order*⁶ resolving two of the issues raised in the *Notice*. The five remaining proposals were addressed in a *Second Report and Order*.⁷ Four of these were resolved in the *Second Report*, but action on the fifth, concerning IF distance separation requirements for the newly created station classes, was deferred pending procurement of additional information necessary to assist us in making a decision.

3. IF distance separation requirements are contained in Section 73.207 of the Commission's Rules. This section specifies, by station class, the minimum distance that each

FM station must be spaced from other FM stations operating on frequencies separated by 10.6 or 10.8 MHz (or 54 channels apart). The required spacings are intended to reduce the likelihood of IF interference occurring in broadcast FM receivers that employ 10.7 MHz as their first IF.⁸ Requiring such stations to be located at least as far apart as the specified distances limits the geographic area within which a receiver would be likely to encounter two relatively strong FM broadcast signals from IF-related stations. The current spacings specified for Classes A and C (the original classes) were intended to avoid overlap of 20 mV/m field strength contours.¹⁰ However, we recognized in the *Notice*, the specified distances were insufficient to prevent such overlap. Nevertheless, evidence of IF interference is limited to allegations made by several parties to this proceeding, which is contradicted by the experiences of others. We are not aware of complaints by the public or broadcasters which can be attributed to IF interference. This suggests that the existing spacings are adequate.

4. In BC Docket 80-90, the Commission simply modified the existing IF distance separation requirements for large Class B and C stations and applied them to the intermediate size classes B1, C2, and C3. Consequently, stations in these new classes must currently meet the requirements as the largest stations, even though they generally operate with lower ERP and HAAT. For the new classes, it seems that some reduction in IF spacing would be appropriate. Therefore, in the *Notice* we proposed to reduce the spacings for the new classes to those necessary to prevent the overlap of the 30 mV/m field strength contours.¹¹ We based this proposal on the current rules for the old classes, which prevent the overlap of field strength contours varying approximately from 24 mV/m to 36 mV/m (30 being halfway between 24 and 36). Our purpose in proposing the reduced spacings for Class B1, C2, and C3 stations was simply to adjust the rules to provide approximately the same protection for these new classes as has existed for Class A, B and C stations since 1965.

5. However, in the *Second Report*, we found the record developed in response to the *Notice* with regard to the issue of IF spacings to be inconclusive. Several of the commenters had indicated that there is no interference problem and that IF spacing requirements should be relaxed or removed for all of the station classes, new and old. Others stated that IF interference is a serious problem and that we should not change any of these requirements. Although IF interference results primarily from radio frequency inadequacies, we had received no comments or information from receiver manufacturers or trade organizations representing receiver manufacturers. Additionally, no laboratory was then in the process of evaluating IF interference susceptibility in various categories of consumer FM broadcast receivers, and had not yet reported its findings.

6. Considering these factors, we concluded in the *Second Report* that adoption at that time of minimum distance separation requirements based on the 30 mV/m protection level would have been premature. However, we stated our belief that we should not indefinitely hold off on new station classes to a stricter standard than the one that has produced no public complaints over a period of many years. We also stated that a more complete record might enable us to determine an appropriate standard that could

be used to develop minimum distance separation requirements for all of the various class relationships, providing a consistent level of protection.

7. Thus, in March of 1988, we issued a *Further Notice of Proposed Rule Making (Further Notice)*¹² with the goal of developing a more comprehensive record concerning the issue. The *Further Notice* also expanded the scope of the proposal to include consideration of existing IF distance separation requirements applicable to the pre-BC 80-90 FM station classes (A, B and C) and possible new IF minimum distance separation requirements applicable to TV Channel 6 allotments and assignments in the vicinity of FM Channel 253 allotments and assignments (and vice versa).

8. In the *Further Notice* we proposed IF minimum distance separation requirements for all FM station classes and for TV Channel 6 and FM Channel 253 stations based on a uniform protection level of 36 mV/m. Noting the available test reports and the existing record in the proceeding did not support the choice of any particular protection level, we selected 36 mV/m because it is the most restrictive level with which we have satisfactory long-term operating experience. We invited interested parties, particularly receiver manufacturers or organizations representing receiver manufacturers, to submit further data and test results that support or oppose our technical basis for our choice of 36 mV/m, or to suggest an alternative protection level.

9. The comment period for the *Further Notice* was extended (pursuant to requests filed by interested parties)¹³ to provide sufficient time for commenters to examine the technical data in a report prepared by our laboratory (OET Report) on the susceptibility of commercial FM receivers to IF interference.¹⁴ The period for public comments was also extended in order to permit a complete and full record to be developed.¹⁵

COMMENTS

10. Fourteen parties filed formal comments in response to the *Further Notice* and five submitted replies to these comments.¹⁶ The majority of the commenters support our proposal generally, but several oppose it or request modifications. Three commenters, Educational Media Associates (EdFM), Edens Broadcasting, Inc. (Edens) and WEDR, Inc. (WEDR) suggest that the Commission abandon IF distance separation requirements in favor of a site or rule waiver policy allowing station locations that do not cause overlap of the predicted median 36 mV/m contours of IF-related stations, taking into account average terrain and directional antenna characteristics. Doing so, they claim, would provide greater site location flexibility, particularly for non-commercial educational stations which EdFM alleges do not usually operate at the commercial class maximums. Chapman S. Root Revocable Trust (Root) filed a reply opposing Edens' comments. Root argues that IF minimum distance separation requirements should be strictly adhered to rather than using a site or rule overlap method.

11. Key Broadcasting, Inc. (Key), although supporting the Commission's proposal, suggests that it does not go far enough. Key states that it has operated a Baltimore, Maryland station (WQSR) short-spaced to an IF-related station for many years and has never received a complaint attributable to IF interference. Key believes that IF distance separation requirements should be abolished entirely, but

that if the Commission retains them, the protection should be no more restrictive than 40 mV/m.¹⁷ C. Cutforth, P.E. (Cutforth), a consulting engineer with the Association of Federal Communications Engineers (AFCEE) both support the concept of a uniform protection level for all station class relationships. These commenters believe that the level proposed, 36 mV/m, seems about right, however, AFCEE suggests additional laboratory testing should be conducted to verify this.

12. Greater Media, Inc. (Greater Media) opposes change in the current IF rule on the ground that it would cause "new IF interference to millions of people currently in use and likely to remain in use for many years." To support this contention, Greater Media supplied a statement by its Vice President of Engineering, Mr. Milford K. Smith, Jr., which recites his experiences with IF interference while serving as Chief Engineer (1967-1970) of WHP-FM, Northampton, Massachusetts. Mr. Smith recalls receiving many complaints of IF interference during that time, resulting in the operation of a nearby IF-related station, W1 Smith further states that he returned to the area in 1988 with ten consumer grade FM receivers that he feels are likely to be used by the general public. At eight locations, Mr. Smith measured and recorded field strengths of the two aforementioned IF-related stations and noted, for each of the receivers, whether interference was experienced. Because about 10% of the receivers experienced interference, Mr. Smith concludes that IF interference continues to be a problem and that the Commission would therefore be ill-advised to change the current IF distance separation requirements. Key, in reply, asserts that the Greater Media statement is flawed because, among other things, the median field strengths from the two stations were not nearly equal at the locations where the trials were conducted, suggesting that the interference reported was not IF interference, but interference of some other type.

13. The Association for Broadcast Engineers (ABES) and Greater Media believe that the study underestimates the IF interference susceptibility of FM receivers typically used by consumers, and should not serve as a basis for the proposed protection level. ABES also submitted a statement that contains histograms showing the IF-related licensed FM station pairs as a function of separation distance. ABES notes that, according to these histograms, there are relatively few IF-related pairs with separations near the current minimums. From this, it concludes that there is little benefit (in terms of site location flexibility) to be realized if the Commission's requirements were to be adopted. The ABES engineering postulates that the current disparity in protection between the various class combinations is a result of rounding of the originally calculated distance changes in the class maximum facilities over the last two decades.

14. The National Association of Broadcast Engineers (NAB) recommends that the Commission "go slow" in changing the IF distance separation requirements. NAB states that the problem of IF interference rests in "current design practice," and that "the receiver industry has not allowed time to embark upon a standardization of the outcome of which would determine the

level to be used.¹⁸ NAB claims that no specific protection level is likely to protect all receivers currently in use, and urges the Commission to retain the current IF spacing requirements pending receiver industry efforts to establish standards that would allow determination of an appropriate protection level.

15. The Electronics Industries Association/Consumer Electronics Group (EIA/CEG) in its comments supplied manufacturers' test data for FM receivers described as "small inexpensive receivers without an antenna connection." This data, according to EIA/CEG, shows that receivers of this type would be "severely penalized" if the Commission's proposal were implemented. EIA/CEG states that there is a technical basis for the disparate protection levels, but does not explain this contention. EIA/CEG recommends that the Commission retain the current IF distance separation requirements.

16. The matter of IF interference resulting from proximity of an FM Channel 253 station and a TV Channel 6 station was addressed in five comments and two replies. 222 Corporation (222), licensee of FM station ~~in Louisiana, Louisiana~~, reports that it has experienced interference problems within its service area for years as a result of the assignment of both a TV 6 and FM 253 in the New Orleans area. 222 suggests that the Commission solve this particular situation by moving the FM station to a different channel. EIA/CEG comments that its manufacturers have reported no interference to TV 6 reception caused by FM 253 operations.¹⁹ NAB supports the proposed TV 6-FM 253 requirement but suggests a tighter standard -- preventing overlap of the 30 mV/m contours -- until the receiver industry develops its standard. ABES recommends that the Commission study the matter further before taking action. AFCE states that there is no documented need for the proposed TV 6-FM 253 requirement. The Association of Maximum Service Telecasters (MST), in reply, comments that although the TV 6-FM 253 proposal is a "welcome demonstration of Commission concern over maintaining the quality of over-the-air broadcast services", it believes that the record does not show a need for the proposed requirement.

DISCUSSION

17. Currently, our rules and policies with regard to FM IF interference result in arbitrarily varying levels of protection and thus are technically inconsistent. As noted earlier, the minimum spacings now required in Section 73.207 of our rules for IF-related stations provide different protection levels for various FM station class combinations.²⁰ The distances for Classes B1 and C1 were not based on any calculated standard but were simply taken from the next larger classes (Class B and C, respectively) as a temporary measure in BC Docket 80-90. Licensees of grandfathered short-spaced stations and other applicants requesting a waiver of the IF distance separation requirements currently must show, among other things, that a proposed modification would not cause the overlap of the 20 mV/m predicted median field strength contours of IF-related stations. Finally, there are currently no requirements at all for the TV Channel 6-FM Channel 253 IF relationship, which presents at least as much potential for IF interference as do the pure FM requirements.

18. We stated in the *Further Notice* that there is no technical justification for the disparate treatment of these similar situations. We have seen nothing in the record in

this proceeding to persuade us otherwise. An FM receiver does not need more protection from two IF-related Class B1 stations than from two IF-related Class A stations. Nor does this same receiver need less protection from TV 6-Channel 253 IF interference than it does from two IF-related Class C1 stations. We believe that it is good public policy for our technical allotment and assignment requirements to be based upon reasonably derived and consistently applied technical standards. As some commenters mentioned, we may consider waivers of our technical rules in cases wherein special unique or unusual circumstances may so dictate, however, even in these cases we believe that a clear understanding by all parties of the technical principles underlying the rule for which the waiver is sought is essential to the proper disposition of such requests.²¹ In view of the foregoing, we conclude that one specific protection level for IF interference should be selected and applied uniformly.

19. In the *Further Notice*, we requested data or results, particularly from receiver manufacturers or organizations representing them, that would quantitatively support or oppose our choice of a uniform 36 mV/m protection level, or would suggest an alternative level. EIA/CEG did submit some data bearing on this matter, but we received no separate comments from receiver manufacturers. In spite of the helpful reports submitted by Greater Media, 222, ABES and others, the record still does not point to any one particular protection level as an optimum choice.

20. A few of the commenters made considerable effort to interpret the OET Report in various, sometimes contradictory, ways. Others challenged or criticized its methodology or conclusions. Boiled down to its essential, however, the OET Report says only that given two undesired IF-related FM signals of a given equal strength, the "average" commercial FM receiver²² will provide satisfactory reception (free of objectionable IF interference) of a desired signal only if that desired signal has a certain minimum strength. Expressed another way, if the desired signal is strong enough, it can override the interference.²³ Converting the signal levels from dBm at the antenna terminals of the "average" receiver to corresponding field strength values in mV/m (which involves certain assumptions about the antenna that would be used), the approximate quantitative results are as follows:

Undesired Strength (Protection level)	Minimum necessary desired signal strength for satisfactory reception
36 mV/m	3 to 25 mV/m depending on frequency
20 mV/m	1 to 8 mV/m depending on frequency

21. Obviously, there is a trade-off between protection level (risk of interference) and site flexibility. That is, a lower level of protection permits shorter separation distances, which in turn allow a greater number of potential transmitter sites. Greater Media states in its comments that such a trade-off "should never favor the latter policy consideration unless it can be proven that restrictions on licensees have in fact substantially reduced opportunities for service to the public." ABES in its comments states that the vast majority of FM stations are now separated from IF-related stations by much more than the current minimum distance separation requirements, and therefore the benefits to be gained, in terms of site flexibility, are limited.²⁴

22. We believe, however, that licensees of certain classes of FM stations should not be unnecessarily constrained by an inconsistent technical standard, while others, operating under a less restrictive standard, do not appear to have experienced any significant problems over the years. Class A stations are the most numerous and therefore most likely to be involved in an IF situation. Class C stations are the most powerful and thus are the stations that would cause the largest overlap area. Yet the current IF distance separation requirements for both the Class A to A and Class C to C combinations produce a protection level of 36 mV/m. No commenter suggested tightening the requirements for these station combinations. Furthermore, we find no justification in the record for setting or maintaining a more restrictive protection level for the other station class combinations.

23. In summary, because we consider it important that our assignment rules have a consistent technical foundation, we believe that our ~~protection level~~ ^{protection level}. In view of years of actual operation by some classes of FM stations under requirements resulting in a protection level of ~~36 mV/m~~, we believe that this level is sufficient to protect FM broadcast receivers currently in use. We encourage receiver manufacturers to attempt to design receivers that are immune to IF interference, as the record indicates this can be done without making such receivers significantly more expensive. We reject the contention of Greater Media and others that increased interference will result from this minor revision of our rules. Although NAB and EIA/CEG recommend that we retain the current distances, we see no public benefit to retaining the technically inconsistent distances. Accordingly, we are revising the required minimum FM IF spacings as we proposed in the *Further Notice*. Furthermore, because the aural transmitter of a TV station operating on Channel 6 is similar to an FM station with regard to potential for IF interference, we are adding a new requirement to address this interference potential.²⁵

24. Some of the commenters suggested that we abandon distance separation requirements in favor of a prohibition on overlap of the predicted median field strength contours at the selected protection level. This approach could be useful in short-spaced cases, where the intent is to provide the required protection by using a directional antenna.²⁶ In fact, it is our long-standing policy to use contour overlap procedure in cases involving IF-related stations that are already short-spaced. However, we believe we should not expand on this policy at this time, since we did not contemplate doing so in the *Further Notice*.

25. In view of our recent proposal to increase the maximum permitted effective radiated power of Class A FM stations²⁷, licensees of these stations should be aware that, although we are not herein increasing the minimum IF distance separation requirements for Class A stations, we will do so in order to maintain the 36 mV/m protection level if the proposed power increase is ultimately adopted.

26. An analysis of our FM licensing records reveals that there are currently 22 pairs of IF-related licensed FM stations that are short-spaced under the current rule. Under the revised rule, 12 of these 22 station pairs will no longer be short-spaced, and will be subject to applicable IF distance separation requirements. The remaining short-spaced stations may continue to operate as authorized,

however, applications to modify these stations that increase the area of overlap of the station median field strength contours will not be accepted.

27. A similar analysis using both the TV engineering databases reveals 7 locations where Channel 6 and FM Channel 253 are short-spaced under the new requirement. (See Appendix B.) They may continue to operate as authorized, however, applications to modify these stations in ways that increase the area of overlap of the FM station's 36 mV/m field strength contour and the 36 mV/m contour station's aural transmitter will not be accepted.

CONCLUSION

28. Some of the comments in this proceeding express a concern that the Commission has embraced generally promoting toleration of increased interference in the FM service simply to increase the stations, and that these FM IF spacing rules are merely part of that philosophy. This is not true. Although we do seek to remove unnecessary barriers that stand in the way of opportunities for expanded service to the public, we remain committed to preserving or improving the quality of all of our services.

29. In this *Third Report and Order*, we are establishing a uniform protection level to serve as a basis for separation requirements, adjusting some of our requirements to meet the uniform protection level. Establishing a new requirement to address a previously unidentified potential source of IF interference (uniform protection level) is not an untried step. It is one that has been in use for some time for many years without significant problems. Expansion to include the other classes of FM stations will result in more reasonable and consistent treatment of station applications, with no significant likelihood of interference.

30. We have previously determined that Section 309 of the Regulatory Flexibility Act of 1980 (PRA) does not apply to this rule making proceeding. It will not have a significant economic impact on a small number of small entities.

31. The actions contained herein have been taken with respect to the Paperwork Reduction Act, found to contain no new or modified form, collection and/or record keeping, labeling, or record retention requirements, and they will not increase or decrease burden hours imposed on the public.

ORDERING CLAUSES

32. Authority for the action taken herein is Sections 4(i), 303(f) and 303(r) of the Communications Act of 1934, as amended.

33. Accordingly, IT IS ORDERED That the Commission's Rules and Regulations ARE amended, effective May 17, 1989, as set forth in Appendix B. FURTHER ORDERED That this proceeding BE DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Donna R. Searcy
Secretary

APPENDIX A

47 CFR Part 73 is amended as follows:

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154 and 303.

2. 47 CFR 73.207 is amended by revising TABLE A in paragraph (b)(1), and by adding a new paragraph (c). In TABLE A, the first three columns, entitled "Co-channel", "200 kHz", and "400/600 kHz", remain unchanged. The fourth column, entitled "10.6/10.8 MHz", is revised to read as follows:

§ 73.207 Minimum distance separation between stations.

(b) ***

(1) ***

TABLE A - MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS (MILES)

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
A to A	***	***	***	8 (5)
A to B1	***	***	***	11 (6)
A to B	***	***	***	14 (9)
A to C2	***	***	***	14 (9)
A to C1	***	***	***	21 (13)
A to C	***	***	***	28 (17)
B1 to B1	***	***	***	14 (9)
B1 to B	***	***	***	17 (11)
B1 to C2	***	***	***	17 (11)
B1 to C1	***	***	***	24 (15)
B1 to C	***	***	***	31 (19)
B to B	***	***	***	20 (12)
B to C2	***	***	***	20 (12)
B to C1	***	***	***	27 (17)
B to C	***	***	***	35 (22)
C2 to C2	***	***	***	20 (12)
C2 to C1	***	***	***	27 (17)
C2 to C	***	***	***	35 (22)
C1 to C1	***	***	***	34 (21)
C1 to C	***	***	***	41 (25)
C to C	***	***	***	48 (30)

(c) The distances listed below apply only to allotments and assignments on Channel 253 (98.5 MHz). The Commission will not accept petitions to amend the Table of Allotments, applications for new stations, or applications to change the channel or location of existing assignments where the following minimum distances (between transmitter sites, in kilometers) from any TV Channel 6 allotment or assignment are not met:

MINIMUM DISTANCE SEPARATION FROM TV CHANNEL 6 (82-88 MHz)

FM Class	TV Zone I	TV Zones II & III
A	16	20
B1	19	23
B	22	26
C2	22	26
C1	29	33
C	36	41

3. 47 CFR 73.213 is amended by redesignating the existing text as paragraph (a) and adding a new paragraph (b) to read as follows:

§ 73.213 Grandfathered short-spaced stations.

(b) Stations at locations authorized prior to [insert date 30 days after date of publication in the Federal Register] that did not meet the IF separation distances required by § 73.207 and have remained short-spaced since that time may be modified or relocated provided that the overlap area of the two stations' 36 mV/m field strength contour is not increased.

4. 47 CFR 73.610 is amended by adding a new paragraph (f) to read as follows:

§ 73.610 Minimum distance separations between stations.

(f) The distances listed below apply only to allotments and assignments on Channel 6 (82-88 MHz). The Commission will not accept petitions to amend the Table of Allotments, applications for new stations, or applications to change the channel or location of existing assignments where the following minimum distances (between transmitter sites, in kilometers) from any FM Channel 253 allotment or assignment are not met:

MINIMUM DISTANCE SEPARATION FROM FM CHANNEL 253 (98.5 MHz)

FM Class	TV Zone I	TV Zones II & III
A	16	20
B1	19	23
B	22	26
C2	22	26
C1	29	33
C	36	41

APPENDIX B

CHANNEL 6 TV STATIONS AND CHANNEL 253 FM STATIONS LICENSED IN THE SAME AREA

KRMA-TV	Denver, Colorado
KYGO-FM	Denver, Colorado
WDSU-TV	New Orleans, Louisiana
WYLD-FM	New Orleans, Louisiana
WOWT	Omaha, Nebraska
KOKO-FM	Council Bluffs, Iowa
KOTV	Tulsa, Oklahoma
KVOO-FM	Tulsa, Oklahoma
KOIN-TV	Portland, Oregon
KUPL-FM	Portland, Oregon
WIPR-TV	San Juan, Puerto Rico
WPRM-FM	San Juan, Puerto Rico
KEDM-TV	Beaumont, Texas
KHYS	Port Arthur, Texas

APPENDIX C

In response to the Further Notice of Proposed Rule Making in MM Docket 86-144, comments were filed by:

Department of Aeronautics, State of Nebraska
Timothy C. Cutforth, P.E.
Educational FM Associates
Key Broadcasting Corporation
WEDR, Inc.
Peter and John Radio Fellowship, Inc. (withdrawn)
Association for Broadcast Engineering Standards, Inc.
Edens Broadcasting, Inc.
Greater Media, Inc.
National Association of Broadcasters
Consumer Electronics Group/Electronic Industries Association
Association of Federal Communications Consulting Engineers
222 Corporation
Bromo Communications, Inc.

Replies were filed by:

Association of Maximum Service Telecasters
Chapman S. Root Revocable Trust
Greater Media, Inc.
Key Broadcasting Corporation
Peter and John Radio Fellowship, Inc. (withdrawn)

FOOTNOTES

¹ IF interference to FM broadcast receivers background noise which degrades reception of in more severe cases, it is characterized by audio, often distorted, of one or both of two of the position of the receiver's tuner dial, occurs, this phenomenon can prevent reception of most or all of the FM stations in the

² Two FM stations are considered to be IF-related frequencies are separated by 10.6 or 11 channels).

³ The actual carrier (at 87.75 MHz) from Channel 6 is IF-related to FM channel 253 (98.5 MHz).

⁴ See Notice of Proposed Rule Making in MM Docket 86-144, 3 FCC Red 160 (1986), 51 Fed. Reg. 15927, p. 1986.

⁵ See Report and Order, 94 FCC 2d 152 (1984) in part and denied in part, 97 FCC 2d 279 (1984).

⁶ In BC Docket 80-90, the Commission amended the rules to provide for the expansion of FM service to the public by providing new opportunities for stations and upgrading of existing stations now authorizes six classes of commercial stations: A, B1, B, C2, C1, and C. Three of the classes, A, B1, and C2, were created in BC Docket 80-90. At existing rules were modified merely to accommodate the new classes. In general, the approach was to apply new Classes B1 and C2 as if they were Class I treat new Class C1 as though it was Class C. indicated that these rules could be refined in a record addressing them in greater detail.

⁷ See First Report and Order in MM Docket 86-144, 52 Fed. Reg. 8259, published March 1987. The Commission amended the rules to permit any be allotted on 20 channels which were previously Class A operation. Also, the Commission declared which provides for the classification of based on transmitter location rather than the community of license.

⁸ See Second Report and Order in MM Docket 86-144, 52 Fed. Reg. 8259, published March 1987. The Commission (1) adopted for classifying FM stations according to their power and antenna height, (2) modified the rules for predicting FM station coverage beam-tilt transmitting antennas, (3) modified for calculating the distance between FM stations accuracy, and (4) restricted modifications short-spaced stations to those which will not be a threat for interference.

⁹ Most consumer FM broadcast receivers use first IF.

¹⁰ See Report and Order in Docket No. 159, 51 Fed. Reg. 8660, July 9, 1986, 5 FCC Red 1679 (1985).

¹¹ For the sake of brevity, the Commission document to the criterion of preventing overlap contours of IF-related stations as a particular. For example, preventing overlap of two stations is referred to as a "30 mV/m protection".

¹² See Further Notice of Proposed Rule Making in MM Docket 86-144, 3 FCC Red 160 (1986).

¹³ See Order Granting Motion for Extension of Time to File Comments, DA 88-704, 3 FCC Red 2818 (1988).

¹⁴ See "Laboratory Test Results of the FM-IF Interference in Broadcast Receivers, Project EEB-86-A", OET Technical Memorandum, FCC/OET TM87-4, June 1987, prepared by J. Ray Hallman and Kenneth R. Nichols.

¹⁵ See *Order Granting Request for Extension of Time to File Reply Comments*, DA 88-1184, 3 FCC Rcd 4773 (1988).

¹⁶ A list of the parties filing comments and replies is attached as Appendix C.

¹⁷ When viewed in the context of protection levels, higher signal strengths correspond to less protection from interference but greater site flexibility. This is because the higher signal strengths are found closer to the transmitting site, therefore the required separation distances can be shorter.

¹⁸ NAB indicates that the National Radio Systems Committee (NRSC) is currently forming a subgroup to consider and make recommendations on issues such as the IF susceptibility of receivers.

¹⁹ IF interference that is the subject of this proceeding is interference to FM receivers only. Channel 253 FM stations do not cause IF interference to television reception.

²⁰ The following are examples of the protection levels that result if maximum facility IF-related FM stations are located at the current minimum spacings contained in §73.207:

CLASS RELATIONSHIP	PROTECTION LEVEL
A to A	35.6 mV/m
B1 to B1	11.5 mV/m
B to B	24.6 mV/m
C1 to C1	17.5 mV/m
C to C	36.7 mV/m

²¹ Notwithstanding our use, in this proceeding, of contour overlap calculations to define protection levels, meeting or exceeding the required separation distances continues to constitute the only measure of compliance with §73.207. Applicants seeking a waiver of §73.207 are advised that alleged discrepancies between the separation distances in the revised rule and the contour overlap calculations presumed to underlie them, do not in themselves constitute sufficient grounds for such a waiver. Other factors germane to each individual case (e.g., lack of an alternative antenna site) must be considered when such waiver requests are evaluated.

²² By average performance with 90% confidence, the OET Report means that if a receiver is selected at random from the universe of all FM receivers, one can be 90% sure that it will perform at least as well as the data indicates.

²³ This information is expressed graphically as Figure 5 in the OET Report. Note however that the lines drawn between the points probably do not express the true curve of the susceptibility characteristic of the "average" receiver because measurements were made at only four "desired" frequencies.

²⁴ If few FM stations have chosen locations where the IF minimum distance separation requirements are an important factor, there is no reason to expect many to decide to do so in the future simply because the Commission revises §73.207. Furthermore, assuming that only a few stations relocate as a result of our application of a uniform standard, the already unlikely possibility of IF interference occurring as a result of such relocations is even less probable.

²⁵ The new and revised distances are calculated to prevent overlap of the predicted median 36 mV/m contours, based upon the FM F(50,50) field strength curves (see §73.333, Figure 1) and assuming the use of maximum facilities by both stations. Consis-

tent with the practice employed for the other minimum distance separation requirements in §73.207, all distances are rounded to the nearest kilometer.

²⁶ See *Report and Order* in MM Docket 87-121, FCC 88-80, adopted December 12, 1988. The Commission adopted rules to permit applicants for commercial FM broadcast stations to request authorization of antenna sites that are nominally short-spaced to other co-channel and first, second, and third adjacent channel facilities, provided that the service of these other facilities is protected in accordance with well established criteria. However, those rules do not allow short-spacing for IF-related stations. The Commission indicated that the technical basis underlying IF distance separation requirements are different from those considered in MM Docket 87-121, in that reception of signals from other nearby FM stations (as well as the two IF-related stations) may be affected. See also footnote 21, *supra*.

²⁷ See *Notice of Proposed Rule Making* in MM Docket 88-35, FCC 88-251, released September 12, 1988.

DISSENTING STATEMENT OF COMMISSIONER JAMES H. QUELLO

In re: Review of Technical Parameters for FM Allocation Rules of Part 73, Subpart B, FM Broadcast Stations (Minimum Distance Separations for IF-Related Stations)

I dissent of the majority's adopting a uniform IF interference standard. The record does not demonstrate that the 36 mV/m standard is sufficient to prevent additional interference in the FM band. On the contrary, data in the record compel a more cautious approach. The burden in the instant proceeding should be placed squarely on those parties seeking to change our current IF separation requirements. Indeed there is presumption against changing existing policies unless the modifications are supported by record evidence.¹

Data submitted in this proceeding examining various types of receivers demonstrate that the Commission should not relax its IF spacing requirements. The Consumer Electronics Group of the Electronics Industry Association studied inexpensive Class I type receivers and concluded that "adoption of the proposed uniform level of protection from IF interference would result in increased interference and a consequent reduction in the quality of the FM broadcast service."² Similarly, data submitted by NAB argues against relaxing our IF interference standards.³ A significant number of parties suggested that the Commission retain its existing rules until further study is conducted or standards for receiver design are improved.⁴ Even the OET report, which examined the potential interference on higher quality Class II-IV receivers, concluded that relaxing current IF separations may lead to increased interference in the band.⁵ OET's analysis concerned an increase from a 20 mV/m to a 30 mV/m protection criterion. The study noted that such an increase may be feasible, depending on the policy trade-off of the additional degradation versus additional FM broadcast service.⁶ It should be noted however, that OET's report examined the potential for interference using a 30 mV/m protection standard. The majority's disregard for the potential adverse interference is, therefore, exacerbated by the fact that the item adopts a more relaxed standard -- 36 mV/m -- than that employed in OET's policy analysis.

Despite the evidence in the record, the majority supports a more relaxed standard on three principal grounds: (1) there is a trade off between IF interference protection and site flexibility; (2) the existing rules are inconsistent, restricting Class B1, B and C1 stations more than Class A or Class C stations; and (3) lack of complaints concerning separations between Class A and Class C stations that currently employ the 36 mV/m IF protection standard.

I agree there are inconsistencies in the present rules. Generally, the commission should endeavor to develop consistent uniform rules whenever possible. However, the desire to create a uniform set of rules should not override countervailing public interest concerns, especially where interference is involved.

The policy trade off between interference protection and site flexibility does not justify a uniform relation of the rules. Given the potential increase in interference, I believe we should treat site problems on a specific case-by-case basis. Such an approach would minimize the risk of additional interference that is associated with a blanket relaxation of the IF protection rules. Moreover, a study submitted by the Association for Broadcast Engineering Standards, Inc. demonstrates that existing IF separation standards do not seriously impact stations in their choice of transmitter sites.⁷ Accordingly, there is little or no benefit to offset the harm of increased interference.

The inconsistencies in IF spacing between Class B1, B, C1 stations and Class A and C stations is neither contrary to the public interest nor arbitrary. The IF standards were established at the time each service was created. Basic administrative law requires that the Commission provide reasoned analysis for changing its position.⁸ The data demonstrate that IF interference occurs in a variety of situations and at different protection levels, depending on the quality of receiver. In this regard, lack of a uniform receiver standard makes the selection of a uniform IF standard even more arbitrary than the status quo. At least we have real world experience with our existing rules. Given the uncertainty in this area, maintenance of the status quo is justified if the Commission is to avoid the risk of increased interference across the FM band. I submit that the administrative need for uniformity is not sufficient to justify changing the present rules.

Finally, assuming *arguendo*, that a uniform standard is in the public interest, there is no reason to adopt the more relaxed 36 mV/m protection standard. The majority states that stations operating under this standard (Class A and Class C stations) "do not appear to have experienced any significant problems over the years."⁹ I believe it is bad policy to make interference decisions on the ground that no one has complained. Most radio listeners that encounter interference will simply switch stations without reporting the problem. Moreover, because interference varies depending on receiver quality, the majority has no idea whether the 36 mV/m standard is appropriate. The Commission has the responsibility to avoid policies that merely create additional interference. We should not delegate our responsibility by establishing a "public grumbling" standard for frequency management. It is worth remembering that the majority's decision for the first time adopts a more relaxed standard for all stations, thereby increasing the potential for IF interference across the entire band. In this regard, the problem may be exacerbated depending on the outcome of our pending proceeding concerning increases in power for Class A stations. On balance, I do not believe that the lack of complaints

affords sufficient assurance that degradation in will not occur. This is especially true where the on the record demonstrating that relaxed standards create additional IF interference. In any event, it does not justify lessening the protections for out of FM stations. Simply stated, the Commission hard data that is necessary to justify a change status quo.

Of course, the perfect solution lies with improved design of FM receivers. The data demonstrate interference problems will vary considerably, depending on the quality of receiver. Most commenters agreed improved design will significantly reduce the IF problem. Accordingly, I support the idea that broadcast and consumer electronics industries should develop new receiver performance standards. In this regard, the Commission should take the lead by endorsing industry developed standard that will balance the additional IF protection against increased costs to consumers from higher quality radio receivers. At the same time, however, we should craft our interference to be consistent with the realities of the radio marketplace. Our decision today runs the risk of increased interference to a significant number of receivers.

On balance, there is little or no evidence relaxing the IF interference standard to 36 mV/m level. The record in this proceeding supports a cautious approach to this problem, perhaps a re-examination of each potential IF interference. The blanket, uniform protection standard adopted in this proceeding is anything but cautious. I agree the majority's decision will provide a consistent standard for all classes of FM facilities. However, our public interest concerns should encompass far more than an artificial uniformity. Given the lack of evidence in the record that would justify such a change, I must dissent from the majority's decision.

FOOTNOTES FOR STATEMENT

¹ See *Motor Vehicle Manufacturers Association v. Automobile Insurance Co.*, 463 U.S. 29, 41, 42 (1983).

² *Comments of the Consumer Electronics Group of the Electronics Industry Association*, filed in MM Docket 87-121, July 12, 1988, at 1. The test primarily involved receivers without an antenna connection. These results constitute a large segment of the existing radio market. The level of interference expected with portable receivers would increase with 30 mV/m. However, the Commission's 36 mV/m is even more relaxed, thereby increasing the potential for interference.

³ National Association of Broadcasters, Department of Technology, *A Review of the FM IF Laboratory Test of the National Association of Broadcasters*, filed in MM Docket 88-144, August 26, 1988. The study found ample evidence from these tests that the IF laboratory rules to control station configurations that cause interference must be maintained." *Id.* at 1. The report also states that further tests are warranted because of the receiver models and general lack of information.

⁴ See, e.g., *Comments of the Association of Federal Communications Consulting Engineers*, filed in MM Docket 87-121, July 12, 1988 at 3 (more definitive test data necessary to justify relaxation of IF protection); *Reply Comments of IF*

³ Local Exchange Carriers' Individual Case Basis DSS Service Offerings, CC Docket No. 88-136, Order Designating Issues for Investigation, 3 FCC Rcd 2582 (1988) (Designation Order); Supplemental Order Designating Issues for Investigation, CC Docket No. 88-136, 3 FCC Rcd 1100 (1988).

Before the
Federal Communications Commission
Washington, D.C. 20554

MM Docket No. 86-144

In the Matter of

Review of Technical Parameters
for FM Allocation Rules of Part 73,
Subpart B, FM Broadcast Stations

SECOND REPORT AND ORDER

Adopted: September 10, 1987; Released: September 25, 1987

By the Commission:

INTRODUCTION

1. The Commission herein amends Part 73 of its rules to promote efficiency in the allocation, licensing, and use of the FM broadcast spectrum. The amendments include a specific method for classifying FM stations according to their effective transmitting power and antenna height, and increased accuracy in the required procedures for predicting FM station coverage and calculating distances between FM stations. Additionally, we amend Section 73.213 of our Rules, which allows routine technical modifications to certain short-spaced FM stations, to permit only modifications that do not increase the potential for interference.

BACKGROUND

2. The Commission now authorizes six classes of commercial FM broadcast stations: A, B1, B, C2, C1, and C. Three of these classes, B1, C2, and C1, were created in BC Docket 80-90.¹ The six classes of stations are intended to provide different ranges of service, and stations in each class are allowed appropriate facilities and required to be separated from other stations by various distances in order to meet this goal. Class A stations operate with modest transmitting power and effective antenna height, and are intended to provide local service. Class B and C stations are afforded much greater power and effective antenna height, and are intended to serve much larger areas. The new classes are intermediate sizes that provide more range than Class A facilities, but less than Class B or C.

3. In Docket 80-90, we focused on the issue of expanding FM service to the public by increasing the number of station classes, thereby providing new opportunities for additional stations and upgrading of existing stations. At that time, we amended certain existing rules merely to accommodate the new classes.² We indicated that we could adjust these affected rules later based on a record addressing them in greater detail.

4. Although it was intended that the new station classes created in Docket 80-90 and the existing classes, together, would provide a continuous range of permissible FM facilities, it soon became apparent that many feasible com-

binations of power and antenna height do not fall within the limits for any of the six classes. This occurs because the minimum power requirements adopted in Docket 80-90 do not make allowance for existing or proposed stations that have relatively large effective antenna heights. Such stations can operate below the minimum power for their class, yet have a range greater than the maximum that could be obtained by a station in the next lower class.³ This results in gaps in the range of allowable facilities. Consequently, our procedures for station classification by power and antenna height need some revision.

5. The Commission initiated this proceeding by adopting a *Notice of Proposed Rule Making (Notice)*⁴ proposing to amend rules that were affected by Docket No. 80-90, but were not given detailed consideration in that proceeding. We also proposed a new method for classifying stations which would allow a continuous range of permissible FM facilities. Finally, we proposed to review certain technical rules which need updating.

6. More than 400 parties filed comments or reply comments in response to the *Notice*.⁵ Earlier this year we adopted a *First Report and Order*⁶ resolving two of the matters we considered⁷ in the *Notice*. The Commission amended the rules to permit any class of station to be allotted on 20 channels which were previously restricted to Class A operation. Also, the Commission declined to remove a rule section which provides for the classification of stations by zone based on transmitter location rather than the location of the community of license. This *Second Report and Order* addresses the remaining proposals.

ISSUES

Power and Antenna Height Requirements

7. *Proposal*. In the *Notice*, we listed examples that illustrate how some reasonable combinations of antenna height above average terrain (HAAT) and effective radiated power (ERP) do not conform to the maximum and minimum requirements of any station class. We stated that this problem becomes particularly acute with Class C1 and Class C facilities, and that the current station classification scheme may impose unnecessary operating restrictions on licensees.

8. To rectify this problem, we proposed a new parameter that we termed the "index" for each class of station. This index is a function of both the HAAT and ERP of a station and it relates generally to the coverage of the station. Use of the index would replace the "equivalence method currently mandated for overheight power reduction" and serve as an alternative to the minimum power requirements for each class. Principally, we would use it to determine the class of stations with HAAT/ERP combinations that do not fall within the current rules. We proposed a specific formula based on maintaining as a constant the maximum predicted distance to the 1 mV/m field strength contour for each class of station. Index maxima were adjusted to permit the largest number of existing stations to be unaffected by the proposed change.

9. *Comments*. The National Association of Broadcasters (NAB), in its comments, does not object to the index method for new stations, but requests that it not be used to downgrade existing stations. NAB characterizes the index proposal as an "ironic return to similar procedures required prior to the current coverage matching method and compares the proposed formula's effect to that of a

graphical depiction of the permissible facilities in each class formerly contained in the engineering charts of our rules.

10. The Association for Broadcast Engineering Standards, Inc. (ABES) supports the concept of replacing the tables of power and height requirements and the equivalence method with a table of maxima, a formula, and an index table. ABES dissents, however, to the specific formula and index table proposed, stating that the proposed method using a single formula is flawed. ABES compares the results obtained using the proposed method versus those obtained using the equivalence method, and suggests an alternative method that employs five slope values (essentially five equations). ABES claims that the single formula we proposed is too simplified and leads to excessive inaccuracy. Also, ABES identifies incorrect height limits resulting from round-off error in our proposed method. ABES believes that its substitute method is not unduly complicated and would result in greater accuracy.

11. Eight commenters are opposed to our proposed index method of classification. Generally, these commenters find the method to be cumbersome, inaccurate, and too complex. It was apparent that some commenters were also unsure of how to use the method. Doug C. McDonnell (McDonnell), an engineering consultant, describes the index method proposal as a "backdoor approach to implementation of a minimum height [requirement] for all classes of stations." McDonnell said that the description of the index method in the *Notice* was "confusing." A.D. Ring & Associates, P.C. (Ring), an engineering consulting firm, agrees with those opposing the index proposal, and recommends that a table showing maximum power limits and maximum and minimum distances to the 1 mV/m field strength contour for each class be adopted instead.

12. A number of commenters suggest that the Commission classify FM stations using a method based on the predicted distance to the 1 mV/m field strength contour instead of the proposed index method. They point out that such contour distances are read from the propagation curves,⁸ and consequently track the curves exactly, whereas the index method only approximates the curves. Three commenters, noting the difficulty of obtaining consistent visual readings, urge the Commission to publish an "official digitization and interpolating formula" that would facilitate the use of computers to produce consistent values. Hammett and Edison, Inc. (H&E), consulting engineers, submitted extensive comments explaining its digitization and interpolation method, and recommends that the Commission adopt its interpolation algorithms and digitized values as the preferred method of reading the F(50,50) and F(50,10) curves. Ring also believes the Commission should consider the establishment of uniform propagation curve definition point tabulations and interpolation algorithms in order to consistently simulate the FM and TV curves, but within the context of a new proceeding. Several commenters suggested that the gaps in allowable facilities be filled by creating more classes of FM stations.

13. *Discussion*. In order to license FM stations efficiently, we must be able to classify them rapidly and accurately. Our principal goal in proposing the index method was to provide a clear-cut means of classifying FM stations according to their antenna HAAT and ERP. However, the commenters are primarily concerned with how accurately the power reduction formulas derived from the proposed index numbers track the propagation curves in

the rules. Although the index method certainly from our station classification does not track the propagation curve current equivalence method or an index method. Furthermore, it is apparent the index method could easily be correctly applied. In some situations, the procedure required by the unexpectedly large departures from limits in the rules. Thus by adopting might be allowing round-off error design or operating parameters to believe that these drawbacks of the index method would provide in station classification problem.

14. Having considered the comments, and reassessed the benefits, we decided not to adopt the index method. Instead, we provide a detailed explanation of how we have used to classify stations in Docket 80-90. This method took and minimum ERP and HAAT, then, for only those stations that limits, it relies on a comparison of distance with six "class contour" listing in the rules.¹¹ Exceptions requirements are allowed for station effective antenna height and for distance exceeds the class contour lower class. We believe that full station classification is the best time.¹² See Rule Sections 73.210 B.

15. On March 2, 1987, we recanted our decision in Docket 80-90. The reclassification, we decided, in this proceeding, to refrain from C stations that do not meet the requirements, provided that the predicted mV/m field strength contour exceeded distance to the 1 mV/m (km).¹³ Had we adopted the index method we would have been reclassifying stations would have been reclassified method we are adopting instead remain Class C.

16. Several commenters request that we consider the index method solely by field strength, but are reluctant to do so at this time. Variations that may occur when values from the propagation chart interest of improving the consistency of values normally read from that the commenters' requests, and interpolating formula for the index method. Accordingly, we plan to address this proposal in a future proceeding.

Prediction of Coverage

17. *Proposal*. We proposed, in calculations for prediction of maximum ERP of the main radiating antenna, regardless of orientation, require the use of the ERP in purpose of the proposed change to account for the increased use of the FM service.¹⁴ In 1970, we re-

ons that would receive pre-
ference that would result,
aral services in these areas.
f these factors, we find that
agreement would serve the
ection 73.213 to allow the l
ered station to be extended
a short-spaced station.

o increase the precision of
e calculation equations in
Some precision in these
lost when the equations
truncated. We had received
e exact conversion factors
e the same degree of preci-
es formerly in the rules.

enters oppose the distance
ey believe that any error
mulas is too small to be
pect the corrected formulas
computers.

the proposed corrections.
ason for less accurate for-
Commission's rules. H&E
of having to use one equa-
Commission's rules, then
accurate full-precision equa-
l topographic maps. H&E
s of the subject, comparing
ce calculations, and recom-
opt the full-precision, non-
Ring also suggests that use
which provides rounded
minutes and seconds, no
conversion factors are easier

ng the more precise coeffi-
as proposed, and revising
re is no reason to maintain
our rules when the loss of
sult of our prior English-
find the argument of in-
uasive. The limiting factor
cerning distance should be
provided, not the Commis-
the FM broadcast service,
and assignments are based
e also incorporating Ring's
exact conversion factors in
version table in the rules.²⁵
B.

1) specify more clearly the
in Boulder County, Colo-
cular latitude and longitude
ty" of a specified point; and
replacement of the trans-
(TV) broadcast station with-
ization in order to clarify
be situations in which there

is no change in the coverage characteristics. We are adopt-
ing these editorial changes as proposed. See Sections
73.1030 and 73.1690 in Appendix B.

OTHER MATTERS

42. At paragraph 17 in the *Notice*, we proposed to
simplify the procedure by which an applicant may obtain
an unoccupied FM channel at a lower class than is allot-
ted. Specifically, we proposed to allow application directly
for the lower class without the currently required rule
making, if the filing window period elapsed and the chan-
nel was unoccupied. One commenter addressed this
issue, supporting our proposal. However, we have decided
to address this matter in a separate proceeding that will
deal with the larger issue of downgrading existing stations
as well as vacant channels. Therefore, we shall not amend
our rules with regard to allotment downgrades at this
time.

43. Applications received prior to the effective date of
these rules will be processed in accordance with the rules
most advantageous to the applicant.

44. Pursuant to the requirements of Section 604 of the
Regulatory Flexibility Act, 5 U.S.C. Section 604, a Final
Regulatory Flexibility Analysis has been prepared as fol-
lows:

Final Regulatory Flexibility Analysis

I. Need and Purpose of Rule

To provide more efficient use of the spectrum allocated
for FM broadcast stations, the Commission increased the
number of FM station classes in 1983, which allows more
stations to be assigned. This action, however, caused cer-
tain technical inconsistencies in the Commission's rules
governing station classification, grandfathered short-spaced
stations, and IF interference separation distances. Addi-
tionally, the Commission's rules governing coverage pre-
dictions and distance calculations needed updating and
revision. Classifying stations on the basis of effective radi-
ated power, antenna height above average terrain, and
distance to a specified signal strength contour will remove
ambiguities caused by the earlier action. Allowing grand-
fathered short-spaced stations to modify routinely their
facilities only in ways that do not increase the risk of
interference will promote efficiency in the use of the FM
broadcast spectrum. Revising and updating the coverage
prediction and distance calculation rules will increase the
accuracy of these procedures.

II. Flexibility Issues Raised in the Comments

Commenters suggested that the Commission adopt sta-
tion classification rules based on distance to signal strength
contour rather than a calculated index as the Commission
originally proposed. Licensees of grandfathered short-
spaced stations requested that the Commission continue to
permit them to routinely modify their stations in ways
that can increase the risk of interference.

III. Significant Alternatives Considered But Not Adopted

The Commission originally proposed to classify FM sta-
tions using a calculated index method. However, this
method was found to be cumbersome, inaccurate and too
complex by the commenters. Also, the Commission pro-

posed to relax the IF interference separation distances for
the new classes of stations it had created in an earlier
action. Laboratory data and comments indicate that addi-
tional information is needed to determine the appropriate
extent of such a relaxation.

45. The proposals contained herein have been analyzed
with respect to the Paperwork Reduction Act of 1980 and
found to contain no new or modified form, information
collection and/or record keeping, labeling, disclosure, or
record retention requirements, and they will not increase
or decrease burden hours imposed on the public.

46. Authority for the action taken herein is contained in
Section 303 of the Communications Act of 1934 as amend-
ed.

ORDERING CLAUSES

47. Accordingly, IT IS ORDERED That Part 73 of the
Commission's Rules and Regulations ARE AMENDED, as
set forth in Appendix B below, effective November 9,
1987.

48. IT IS FURTHER ORDERED That those Class C
stations that, as of March 2, 1987, were operating with an
ERP less than 100 kW, HAAT greater than 300 meters,
and distance to the 1 mV/m field strength contour exceed-
ing 72 km, and consequently were not reclassified pending
action in this proceeding, ARE DESIGNATED Class C.

49. IT IS FURTHER ORDERED That the Petition for
Partial Reconsideration filed by Hudson Group Limited
Partnership of Pennsylvania IS DISMISSED.

50. IT IS FURTHER ORDERED That *Public Notice*
No. 75-1347, released December 15, 1975 IS AMENDED,
as set forth in a revised *Public Notice*, attached as Appen-
dix C.

FEDERAL COMMUNICATIONS COMMISSION

William J. Tricarico
Secretary

APPENDIX A

The following submitted comments addressing our spe-
cific proposals in this proceeding:

West Central Broadcasting, Inc.
Callais Broadcasting, Inc.
EJM Broadcasting
Stannard Broadcasting Company, Inc.
WKDZ, Inc.
H.R. Williams, Jr (KPSM)
Americom
Capital Broadcasting, Inc.
Enterprise Publishing Company
E.O. Roden And Associates, Inc.
Garamella Broadcasting Company
Hayco Broadcasting, Inc.
Hudson Broadcasting Corporation
Lakeland Broadcasting, Inc.

La Porte County Broadcasting, Inc.
Tri-Cities Broadcasting, Inc.
WBIP Broadcasting Corporation
Edward A. Schober (Radiotechniques)
Wath, Inc.
A.D. Ring & Associates, P.C.
Dick Broadcasting Company, Inc.
Lasalle County Broadcasting
WCME, Boothbay Harbor, Maine
Kinzua Broadcasting Co., Inc.
New Jersey Class A Broadcasters Assoc.
Clear Channel Communications, Inc.
WSEA-FM, Georgetown, Del.
Beasley Broadcast Group
Capitol Broadcasting Corporation
National Public Radio
Association of Federal Communications Consulting
Engineers
Southland Communications, Inc.
Bart Walker
Key Broadcasting Corporation
Mountain Tower
John J. Davis Associates
Carlos Juan Colon Ventura
Broadcast Engineering And Equipment Maintenance
Co.
Russell and Susan Kinsley
Communications General Corporation
Sunshine Wireless Company
Doug C. McDonnell
Association for Broadcast Engineering Standards, Inc.
Brown Broadcasting Service, Inc.
Stansell Communications, Inc.
Hammett and Edison, Inc.
Columbia FM, Inc.
Eric R. Hilding Southwest Communications, Inc.
Dwyer Broadcasting, Inc.
Adventure Communications, Inc.
Corporation for Public Broadcasting
Edens Broadcasting, Inc.
Magnuson & Associates, Inc.
Scripps Howard Broadcasting Company
Harvitt Broadcasting Corporation
Fox Broadcasting Company
KGB, Incorporated
Greenup County Broadcasting, Inc.
Carawba Valley Broadcasting Company, Inc.
Triple D Properties, Inc.
Lawrence Behr Associates, Inc.
Lasalle County Broadcasting, Inc.
KLOK Radio, Ltd.
Voice of The Orange Empire, Inc.
National Association of Broadcasters
WDAC (FM), Lancaster, Pennsylvania
Duttreil-Rackley

of Class A broadcast stations. Government officials filed a suggestion made by Clear ac. in their comments, that for Class A stations be in- and Order, the Commission suggestion is outside the scope to consider it further in this

DIX B

as follows:

Part 73 continues to read as

d 303.

ed by revising paragraph (c)

nd distance computation.

..

s paragraph shall be used to two reference points, except lence involving stations in od for distance computation od for distance computation shall be rnational agreement shall be forth in this paragraph is eeding 475 km (295 miles)

longitude of each reference nd format to degree-decimal

and seconds by 3600 then r,

tude between the two refer- vo latitudes as follows:

y2

kilometers per degree lati- dle latitude calculated in

$6605 \cos(2ML) + 0.00120$

kilometers per degree lon- dle latitude calculated in

$41.1 + 0.09455 \cos(3ML) +$

(5) Calculate the North-South distance in kilometers as follows:

$$NS = KPDlat (LAT1dd - LAT2dd)$$

(6) Calculate the East-West distance in kilometers as follows:

$$EW = KPDlon (LON1dd - LON2dd)$$

(7) Calculate the distance between the two reference points by taking the square root of the sum of the squares of the East-West and North-South distances as follows:

$$DIST = (NS^2 + EW^2)^{0.5}$$

(8) Round the distance to the nearest kilometer.

(9) Terms used in this section are defined as follows:

(i) LAT1dd and LON1dd = the coordinates of the first reference point in degree-decimal format.

(ii) LAT2dd and LON2dd = the coordinates of the second reference point in degree-decimal format.

(iii) ML = the middle latitude in degree-decimal format.

(iv) KPDlat = the number of kilometers per degree of latitude at a given middle latitude.

(v) KPDlon = the number of kilometers per degree of longitude at a given middle latitude.

(vi) NS = the North-South distance in kilometers.

(vii) EW = the East-West distance in kilometers.

(viii) DIST = the distance between the two reference points, in kilometers.

3. A new section 47 CFR 73.210, Station Classes, is added:

§ 73.210 Station classes.

(a) The rules applicable to a particular station, including minimum and maximum facilities requirements, are determined by its class. Possible class designations depend upon the zone in which the station's transmitter is located, or proposed to be located. The zones are defined in § 73.205. Allotted station classes are indicated in the Table of Allotments, § 73.202. Class A, B1 and B stations may be authorized in Zones I and I-A. Class A, C2, C1, and C stations may be authorized in Zone II.

(b) The power and antenna height requirements for each class are set forth in § 73.211. If a station has an ERP and an antenna HAAT such that it cannot be classified using the maximum limits and minimum requirements in § 73.211, its class shall be determined using the following procedure.

(1) Determine the reference distance of the station using the procedure in paragraph (b)(1)(i) of § 73.211. If this distance is less than or equal to 24 km, the station is Class A, otherwise,

(2) For a station in Zone I or Zone I-A, except for Puerto Rico and the Virgin Islands:

(i) If this distance is greater than 24 km and less than or equal to 39 km, the station is Class B1

(ii) If this distance is greater than 39 km and less than or equal to 52 km, the station is Class B.

(3) For a station in Zone II:

(i) If this distance is greater than 24 km and less than or equal to 52 km, the station is Class C2.

(ii) If this distance is greater than 52 km and less than or equal to 72 km, the station is Class C1.

(iii) If this distance is greater than 72 km and less than or equal to 92 km, the station is Class C.

(4) For a station in Puerto Rico or the Virgin Islands:

(i) If this distance is less than or equal to 42 km, the station is Class A.

(ii) If this distance is greater than 42 km and less than or equal to 46 km, the station is Class B1.

(iii) If this distance is greater than 46 km and less than or equal to 78 km, the station is Class B.

3. 47 CFR 73.211, Power and antenna height requirements, is amended by revising the text of paragraph (a) and subparagraphs (b)(1) and (b)(2), and by removing paragraphs (d) and (e).

§ 73.211 Power and antenna height requirements.

(a) *Minimum requirements.* (1) Except as provided in paragraphs (a)(3) and (b)(2) of this section, the minimum effective radiated power (ERP) for:

Class A stations must equal 0.1 kW (-10.0 dBk);

Class B1 stations must exceed 3 kW (4.8 dBk);

Class B stations must exceed 25 kW (14.0 dBk);

Class C2 stations must exceed 3 kW (4.8 dBk);

Class C1 stations must exceed 50 kW (17.0 dBk);

Class C stations must equal 100 kW (20.0 dBk).

(2) Class C stations must have an antenna height above average terrain (HAAT) of at least 300 meters (984 feet). No minimum HAAT is specified for Classes A, B1, B, C2, or C1 stations.

(3) Stations of any class except Class A may have an ERP less than that specified in paragraph (a)(1) of this section, provided that the reference distance, determined

in accordance with paragraph (b)(1)(i) of this section, exceeds the distance to the class contour for the next lower class.

(b) *Maximum limits.* (1) The maximum ERP in any direction, reference HAAT, and distance to the class contour for the various classes of stations are listed below:

Station Class	Maximum ERP	Reference HAAT in meters (ft)	Class contour distance in kilometers
A	3kW (4.8 dBk)	100 (328)	24
B1	25kW (14.0 dBk)	100 (328)	39
B	50kW (17.0 dBk)	150 (492)	52
C2	50kW (17.0 dBk)	150 (492)	52
C1	100kW (20.0 dBk)	299 (981)	72
C	100kW (20.0 dBk)	600 (1968)	92

(i) The reference distance of a station is obtained by finding the predicted distance to the 1 mV/m contour using Figure 1 of § 73.333 and then rounding to the nearest kilometer. Antenna HAAT is determined using the procedure in § 73.313. If the HAAT so determined is less than 30 meters (100 feet), a HAAT of 30 meters must be used when finding the predicted distance to the 1 mV/m contour.

(ii) If a station's ERP is equal to the maximum for its class, its antenna HAAT must not exceed the reference HAAT, regardless of the reference distance. For example, a Class A station operating with 3 kW ERP may have an antenna HAAT of 100 meters, but not 101 meters, even though the reference distance is 24 km in both cases.

(iii) Except as provided in paragraph (b)(3) of this section, no station will be authorized in Zone I or I-A with an ERP equal to 50 kW and a HAAT exceeding 150 meters. No station will be authorized in Zone II with an ERP equal to 100 kW and a HAAT exceeding 600 meters.

(2) If a station has an antenna HAAT greater than the reference HAAT for its class, its ERP must be lower than the class maximum such that the reference distance does not exceed the class contour distance. If the antenna HAAT is so great that the station's ERP must be lower than the minimum ERP for its class (specified in paragraphs (a)(1) and (a)(3) of this section), that lower ERP will become the minimum for that station.

4. 47 CFR 73.213 is revised in its entirety to read as follows:

§ 73.213 Grandfathered short-spaced stations.

Stations at locations authorized prior to November 16, 1964 that did not meet the separation distances required by § 73.207 and have remained short-spaced since that time may be modified or relocated provided that the predicted distance to the 1 mV/m field strength contour is

APPENDIX C
PUBLIC NOTICEAGREEMENT POLICY FOR SHORT-SPACED FM
BROADCAST STATIONS EXPANDED

The Commission will now consider mutual agreements between grandfathered short-spaced stations for facilities increases on the same channel, and/or the first, second or third adjacent channels.

By its *Public Notice*, No. 75-1347, released December 15, 1975, 57 FCC 2d 1263 (1975), the Commission reaffirmed the policy of considering agreements between grandfathered short-spaced stations (FM broadcast stations at locations authorized prior to November 16, 1964 which did not meet the minimum spacing requirements of § 73.207 of the rules and have remained short-spaced since that time) to increase their facilities beyond those routinely permitted for such stations in § 73.213 of the rules. That *Public Notice* set forth the criteria to be used in evaluating whether such an agreement is in the public interest.

This policy, however, has applied only to grandfathered short-spaced stations that were short-spaced on the same channel and/or the first adjacent channels. In order to maintain consistency with § 73.213, as amended in MM Docket 86-144, the agreement policy will now apply also to grandfathered short-spaced stations that are short-spaced on the second and third adjacent channels.

FOOTNOTES

¹ *Report and Order*, 94 FCC 2d 152 (1983), *recon. granted in part and denied in part*, 97 FCC 2d 279 (1984). The Commission amended the FM broadcasting rules to accommodate more stations by increasing the number of station classes.

² In general, our approach was to apply existing rules to new Classes B1 and C2 as if they were Class B, and likewise to treat new Class C1 as though it was Class C. This resulted in no increased burden for many existing stations that were reclassified.

³ For example, consider a Zone 1 station having facilities of 20 kW power and 140 meters effective antenna height. The power is less than the minimum requirement of 251 kW for Class B stations, but exceeds the 16 kW permitted for Class B1 stations using a 140 meter effective antenna height.

⁴ 51 Fed. Reg. 15927, published April 29, 1986.

⁵ Commenters are listed in Appendix A.

⁶ 52 Fed. Reg. 8259, published March 17, 1987.

⁷ On April 15, 1987, a Petition for Partial Reconsideration was filed by Hudson Group Limited Partnership of Pennsylvania (Hudson), licensee of Class A FM Station WSFM of Harrisburg, Pa. We will dismiss Hudson's petition. Hudson claims that it is unclear from the *First Report and Order* whether the Commission considered a suggestion it made in its comments -- that Class A stations unable to upgrade to a higher class because of required separations be allowed to increase facilities to the maximum extent technically feasible while still providing full protection to other stations. Hudson newly proposes in its petition that we expand the applicability of § 73.213(a) to allow Class A stations to become short-spaced where a mutual agreement exists between the affected stations. Both proposals are outside the scope of this proceeding and will not be considered here.

⁸ Overheight power reduction means that stations with antennas that exceed the maximum HAAT for their class must operate at a lower ERP such that the predicted distance to the 1 mV/m field strength contour is not increased beyond that which would result from operating at maximum ERP and HAAT. See current § 73.211(b). In this proceeding, we are substituting the term "reference HAAT" in place of "maximum HAAT", because it may be exceeded if ERP is reduced accordingly. By contrast, maximum ERP must not be exceeded under any circumstance.

⁹ The F(50,50) and F(50,10) propagation curves for FM stations are contained in § 73.333 of our rules.

¹⁰ At paragraph 11 in the *Notice*, we estimated that 49 stations would be subject to a different classification due to rounding error, under the index method.

¹¹ We use the term "reference distance" to mean the predicted distance from a station's transmitting antenna to its 1 mV/m field strength contour, rounded to the nearest kilometer. The "class contour distances" listed in new § 73.211(b) of the rules are based on the reference HAAT and maximum ERP for each station class. For stations that cannot be classified using the maximum and minimum HAAT and ERP limits in the rules, we first determine the reference distance using the station's HAAT (as defined in § 73.10(a)) and its maximum proposed or authorized ERP. This reference distance is then compared to the six class contour distances. The class of the station corresponds to the lowest class contour distance that equals or exceeds the station's reference distance. As indicated in the *Notice*, the proposed index method was designed to approximately reflect the predicted distance to the 1 mV/m contour. Thus the method adopted instead is essentially similar to, although more accurate than, the method proposed.

¹² We are not amending at this time the portion of the power and antenna height rule which provides special limits for stations in Puerto Rico and the Virgin Islands. We have received a petition for rule making, (RM 5691), *Public Notice* January 14, 1987, from Carlos Juan Colon Ventura, licensee of WSAW (FM), Viques, Puerto Rico, which requests increased power for stations in Puerto Rico and the Virgin Islands. We may propose adjustments to that portion of the rule, if warranted, after consideration of that petition.

¹³ For example, a Class C station with 85 kW ERP and a HAAT of 361 meters would have been downgraded to a Class C1 using the ERP criterion (because the minimum ERP for Class C is 100 kW), but no action was taken because the predicted distance to its 1 mV/m field strength contour is 75 kilometers. This exceeds the maximum predicted distance to the 1 mV/m field strength contour for a Class C1 station, which is 72 kilometers. See *Public Notice* "Reclassification of FM Facilities Pursuant to BC Docket 80-90", FCC 87-93, released March 24, 1987.

¹⁴ Both charts comprise a set of propagation curves drawn on a linear-logarithmic graph. The F(50,50) chart, used for service and coverage contours, contains 40 curves, and the F(50,10) chart, used for interference contours, contains 50 curves. Often, the desired value does not lie on one of the curves, but between two of them. In such cases, graphical or mathematical interpolation must be used to arrive at result. Because of limitations in printing resolution and human visual acuity, it is not unusual for different persons to obtain slightly different results.

¹⁵ That proceeding would consider which of several possible interpolation methods should be used, as well as the optimum number of data points for each method.

¹⁶ Beam-tilt antennas direct the maximum radiation downwards towards the earth's surface, rather than towards the horizon. Consequently, the ERP in the horizontal plane is less than the maximum ERP.

¹⁷ Petition for rule making was filed by the engineering consulting firm of duTreil-Rackley, November 26, 1985. In the *Notice*, the Commission dismissed this petition without prejudice, but retained it as a part of the official record in this proceeding.

¹⁸ Most consumer FM broadcast receivers use 10.7 MHz as their first IF. IF interference is characterized by the reception of the audio, often distorted, of one of the two stations involved, regardless of the position of the receiver's tuner dial. Thus, when it occurs, this phenomenon can prevent reception by the affected receiver of most or all of the FM stations in the area.

¹⁹ See *Report and Order* in Docket No. 15934, FCC 65-575, 30 Fed. Reg. 8680, July 9, 1965, SRR 2d 1679 (adopted June 30, 1965).

²⁰ Noticeably absent from the record are comments from FM receiver manufacturers and associations that represent the consumer electronics industry. Technical analyses and data relevant to improvement in receiver IF interference immunity due to technological advancement would have been particularly welcome. In addition, the Commission's laboratory is currently evaluating IF interference susceptibility in various categories of new FM receivers, and expects to report its findings later this year.

²¹ Despite our consideration of contour overlap standards in other contexts in this proceeding, at present meeting or exceeding the required separation distances constitutes the only measure of compliance with this particular rule. Furthermore, inasmuch as we shall consider these matters in a further proceeding, at present we shall not consider alleged discrepancies between the separation distances in the rule and contour overlap calculations presumed to underlie them to constitute sufficient grounds for a waiver of § 73.207.

²² Of those reclassified, some may have lost their grandfathered status as a result of the reduced separation requirements of the new class.

²³ See § 73.4235 and *Public Notice* 75-1347, released December 15, 1975. This policy has applied only to co-channel and first adjacent channel short-spacing in the past, however, we will extend it to cover second and third adjacent channel short-spacing situations upon the effective date of the rules adopted herein.

²⁴ See *Notice* at paragraph 24. The equations we proposed are correct for distance calculations based upon Clarke's Reference Spheroid of 1866. H&E states that these are appropriate for Commission licensees' use because USGS topographic maps are based on the Clarke spheroid.

²⁵ Applicants are advised to use the formulas specified in international agreements for calculations involving stations in Canada and Mexico, to the extent that these may differ from the formula we are adopting herein.

Commission recently explained in its July 25, 1988 Brief, FCC No. 87-1635 (D.C.

proposal is a sham, tantamount to a fraud, see *Mulkey, supra*, and thus can not prevail in any event, we will not reach these other issues.

23. *Progressive's Comparative Case*: Our remand order also sought additional evidence regarding Progressive's comparative showing because it sought credit for Heno Castillo, a 42.86% stockholder who was proposed as the station's full-time (more than 40 hours per week) general manager. However, Mr. Castillo also intended to retain his position as a full-time Professor of English at a local junior college, 104 FCC 2d at 334. On remand the ALJ found no evidence challenging the bona fides of this proposal but did conclude that Mr. Castillo was only entitled to part-time integration credit for his proposal, 51D, para. 65. The ALJ's ultimate conclusion reducing Castillo's credit to part-time is mandated by the precedent recently discussed in *Stanly Group Broadcasting, Inc.*, FCC 88R-1, released August 16, 1988, para. 18. See also *Religious Broadcasting Network*, 3 FCC Red 4085, 4100 (Rev Bd 1988). In sum, Professor Castillo "has not demonstrated how he can accommodate his work schedule so that both [full-time] vocations can be fulfilled at once. It is well-settled Commission precedent that persons seeking participation credit must make a persuasive showing as to how they will accommodate their outside professional business activities so as to fulfill their specific commitments to the proposed station." *Stanly Group, supra*, para. 18 (citing *Leininger-Geddes Partnership*, 2 FCC Red 3199 (Rev Bd 1987), review denied, 3 FCC Red 1181 (Comm'n)). Thus Progressive is entitled to only 42.86% part-time credit for Castillo's proposal. Its combined comparative credit for some 14% full-time and 57% part-time credit (see *Inane Decision*, 104 FCC 2d at 345 para. 27) is more than sufficient to prevail over Bell County's sham proposal. See *Mulkey, supra*. And, as the ALJ previously held, *MaryMc* can not be compared because it is not basically qualified.

24. ACCORDINGLY, IT IS ORDERED, That the Motion to Strike and the Further Motion to Strike filed March 24 and 28, 1988, respectively, by Progressive Communications, Inc., the Motion to Strike filed April 15, 1988 by Bell County Broadcasting Company, and the Request for Judicial Notice filed June 22, 1988 by MaryMc Broadcasting Co. ARE DISMISSED as moot; and

25. IT IS FURTHER ORDERED, That the application of Progressive Communications, Inc. (File No. BPH 820512AP) IS GRANTED, and that the applications of MaryMc Broadcasting Co. (File No. BPH 820524BB) and Bell County Broadcasting Company (File No. BPH 820524BJ) ARE DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Joseph A. Marino
Chairman, Review Board

contemplates that applicant in accordance with the criteria so as to be likelihood of being applicant. *Alexander S.* 431 (1981). The Commission, that an applicant mal structure on paper, but in reality that the depiction of how the managed. Thus, limited holders, although nominally the applicant, may control the applicant's in those instances, the the applicant's formal the nominal passive stockholders or limited active in the management der them in any integration. *Ministries, Inc.*, 104 ev. Bd. 1986), review denied, *aff'd by judgment sub Corp. v. FCC*, 838 F. 2d : *KIST Corp.*, 102 FCC 2d : *sub nom. United American*, 801 F. 2d 1436 (D.C. Cir. 107 S.Ct. 2182 (1987); *Henn*, 63 FCC 2d 419 (Rev. Bd. 1988). "[W]here record for inferring that will exercise influence or business," an applicant's interest disregarded. *Victory Me*, 175 (1988).

prevails where an "inactive" is also a purported ex- and continues to influence the See *Mulkey*, 3 FCC Red at nited" partner, dominates Mrs. ner; therefore, no integration *Igdalene Gunden Partnership*, 3 v. Bd. 1988) (discussion of es").

hearing, the ALJ also specified ty's financial qualifications, the of financial qualifications, and financial representations made 1. After making specific findings 1, paras. 20-31, the ALJ reached (a) On the day it filed its was not financially qualified and (b) Bell County presently does financial qualifications to be a para. 55; and (c) Teresa Watts represent her husband's financial are; instead, she was confused as money market account. Id., para. our conclusion that Bell County's

Before the
Federal Communications Commission
Washington, D.C. 20554

MM Docket No. 87-140

In the Matter of

Review of Technical and Operational
Requirements: Part 73-C
Noncommercial Educational FM
Broadcast Stations

MEMORANDUM OPINION AND ORDER

Adopted: July 14, 1988; Released: September 28, 1988

By the Commission:

INTRODUCTION

1. The Commission has before it a *Petition For Reconsideration* (petition), filed by California State University, Long Beach Foundation (CSU or petitioner), licensee of station KLON(FM), Long Beach, California, requesting reconsideration of the *Report and Order*, 52 Fed. Reg. 4364 (Nov. 16, 1987), adopted in the above-referenced proceeding. No comments were filed in response to the petition. For reasons given below, we will deny the petition.

BACKGROUND

2. Prior to the adoption of the *Report and Order*, non-commercial educational (NCE-FM) stations within 320 kilometers (199 miles) of the United States-Mexican border (border area) were authorized on an allotment-assignment basis identical to that used for commercial FM stations. It was a two-step procedure: First, a petition would be filed to amend the Commission's Rules to provide for a channel allotment for the particular community or city of license. Once this was done, the applicant would apply for a station license. This required the Commission to maintain a table of NCE-FM allotments for the border area. In order to amend the table, the Rules required that minimum distance separations be maintained between the proposed station and Mexican FM stations as set forth in the FM Broadcasting Agreement between the United States and Mexico.² Additionally, the Rules required that applicants observe the same distance separations from domestic border area NCE-FM stations as from Mexican FM stations.

3. In contrast, NCE-FM applicants outside the border area may apply for a frequency assignment provided the distance from the proposed station to another NCE-FM station is sufficient to prevent overlap of specified, predicted signal-strength contours. The assignment policy is based on what is known as "contour overlap," or "the contour method." The assignment policy based on contour protection is also known as "demand basis," because we do not require that an allotment be granted before ap-

plication for an assignment can be accepted. The demand system has been used in making NCE-FM assignments throughout the rest of the United States since the earliest days of NCE-FM. Consequently, the only area where specific distance separation requirements between NCE-FMs was prescribed was in the border area.

4. Under the border area NCE-FM policy in effect prior to the *Report and Order*, a proposed station could have met the required spacing from Mexican stations, but have been denied an allotment because it did not meet the required separation to another domestic NCE-FM station in the border area. To eliminate that unnecessarily restrictive assignment policy, we initiated the instant proceeding.³ Because the contour method allows stations to tailor their coverage areas,⁴ the Commission predicted that NCE-FM stations would be afforded greater assignment flexibility, which would enhance the opportunities for station assignment, perhaps giving NCE-FM applicants in the border area the opportunity to squeeze new service into crowded markets. In general, we predicted that the new policy would allow broadcasters to obtain station assignments in a "quicker, easier, and less costly manner."

5. At the time the Commission initiated the instant proceeding there were several allotment cases pending for border area NCE-FM stations. One of these cases, MM Docket 85-230, included the mutually exclusive applicants CSU, Apple Valley Educational Broadcasters (Apple Valley), California Lutheran College (CLC), and the Regents of the University of California (Regents). The Commission proceeded with the generic rule making, MM Docket 87-140, without proposing to grandfather any pending allotment proceeding, including MM Docket 85-230. Later, when the Commission adopted the *Report and Order*, it dismissed NCE-FM allotment proceedings that were pending, including those in MM Docket 85-230, as such proceedings were no longer necessary under the new allocations policy.

PETITION

6. CSU alleges that the Commission's action in adopting the *Report and Order* "belies" its avowed interest in allocating noncommercial educational stations in a quicker, easier, and less costly manner. Instead, the petitioner states that the motivation which led to our amending the border area allocations policy was administrative convenience. Thus, the petitioner states that "(the) Commission apparently decided that, rather than resolve a multi-party rulemaking proceeding to amend the table of allotments in Section 73.504, it would simply scrap the table altogether."⁵

7. The petitioner further alleges that the Commission acted unfairly in resolving MM Docket No. 85-230 by dismissing those proceedings without precluding the filing of additional requests for assignment on the channels at issue in MM Docket No. 85-230. Thus, CSU states that the effect of not precluding additional applications for assignment would be to allow new parties to propose assignments on the contested channels. Such competing applications could require a comparative hearing under Section 307(b) of the Communications Act of 1934, as amended, as to which community should receive the new or improved service. CSU asks us to postpone the effective date of the *Report and Order* to negate the impact of the Commission's action on the parties involved in MM Docket No. 85-230.

had not dismissed the proceedings in 85-230, CSU contends that a COM-CLC compromise, would have of the Docket 85-230 proceeding that in the outcome of Docket 87-140.⁶ es that our acceptance of CLC's could have required waiver of our ermitting short-spaced allotments, er suggests two options that we lie of granting all components of al as it was submitted. Both of the ould have required that we grant C compromise except those that petitioner states that these options Commission, and that we should allotments prospectively by estab- id in which the effective date for ould be set far enough in the future ants would have time to prepare r the vacant allotments before the ed. Finally, CSU requests that the der to Show Cause why its Station be upgraded on its current chan- that the Commission modify the cordingly.

DISCUSSION

hanged its allocations policy in the ge the development and extension ed to meet the needs of NCE-FM nment system, contour method of ed for NCE-FM stations through- nity since the earliest days of the ments to the proceedings in MM ncingly supported our proposal to on contour protection. All com- f the four parties involved in the in MM Docket No. 85-230 stated ur method assignment would im- ethods.⁷ Some commenters, among ecommunications and Information that the number of NCE-FMs in ncrease under the new allocations y to the petitioner's claim, we did in order to dispose of the alloca- 4 Docket No. 85-230. Rather, we because we concluded that the stem was not optimally suited to f NCE-FM; it was unnecessarily unnecessarily costly to obtain an nent.⁸

father pending NCE-FM allotment der area, the Commission chose to it had not yet been resolved. The ined that the allotment-assignment dvantageous for NCE-FM; thus, it ing the good effects of the rule o use the inferior assignment poli- the contour method allows sta- bility to tailor their coverage; that several applicants would now l obtain assignments where before ction could encourage the submis- an assignment requests by parties

which may have been precluded from entering pending border area allotment proceedings by the old spacing restrictions. In our view, this expansion of NCE-FM applicant pool is beneficial for the NCE-FM service. Indeed, encouraging applicants to apply for stations where before they could not was the express goal of the generic proceeding.

11. CSU argues that we should delay the effective date of the new rules and continue to use the allotment assignment allocations policy primarily because it has spent considerable time and money attempting to obtain an allotment. While the Commission recognizes the petitioner's frustration resulting from our decision to change the allocations policy immediately, we conclude that the public would best be served by eliminating the allotment assignment allocations policy without delay.⁹ We also note that the petitioner does not contest our authority to make a judgment on the effective date of the new rules. In fact, the petitioner does not allege that the Commission committed any errors in our findings of fact or conclusions of law, any violations of statute, or any policy contradictions in deciding to eliminate the table immediately.¹⁰

12. The Commission believes that its dismissal of the allotment proceedings is consistent with our goal of promoting efficiency in the use of the broadcast spectrum. It should be noted that our action does not preclude the petitioner from obtaining a station assignment in any way. In fact, by allowing the petitioner to base its spacing on the contour method, the Commission offers CSU greater flexibility than it had before in obtaining a workable allocation arrangement with other parties also interested in obtaining station assignments.¹¹

13. Accordingly, IT IS ORDERED that the Petition for Reconsideration and the request for issuance of an Order to Show Cause filed by California State University, Long Beach Foundation ARE DENIED.

FEDERAL COMMUNICATIONS COMMISSION

H. Walker Feaster, III
Acting Secretary

FOOTNOTES

¹ Petition appeared *Public Notice*, Report No. 1700, Jan. 13, 1988.

² See "Agreement Between the United States of America and the United Mexican States Concerning Frequency Modulation in the 88 to 108 MHz band," ratified Nov. 9, 1972.

³ See *Notice of Proposed Rule Making*, 52 Fed. Reg. 23873 (June 25, 1987).

⁴ On the other hand, channels allocated according to a table of allotments are premised on an assumed coverage area, based on the maximum effective radiated power and antenna height above average terrain authorized by the Commission for the particular class of station, regardless of actual power and antenna height used. Using the contour method, the protected coverage area is determined using actual power and antenna height. Also in contrast to channels allocated by allotment, NCE-FMs may routinely tailor their coverage using directional antennas.

⁵ See petition, p. 2.

The CLC compromise accommodated all parties, but was limited after we released the *Notice*, and required that we meet our distance separation requirements for border area NCE-FM stations, as embodied in the now-deleted Section 73.504(c).

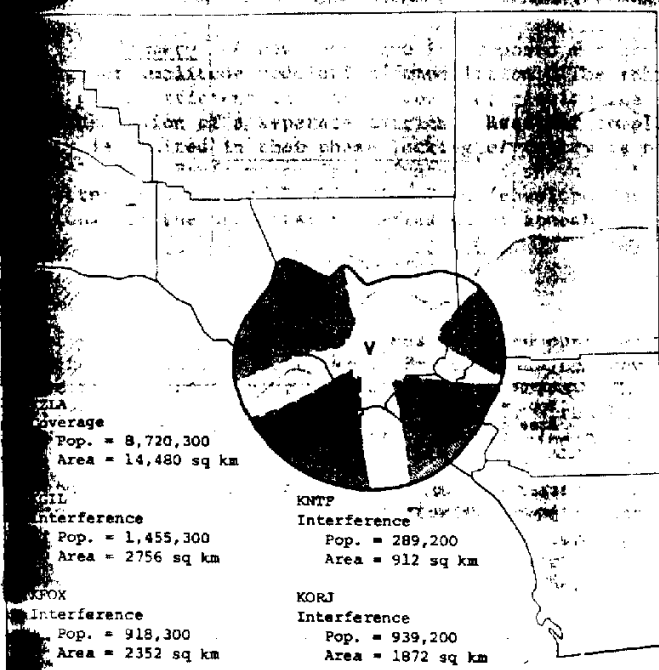
The fourth party, CLC, acknowledged that the new policy would serve the public interest by allowing the establishment of NCE-FM stations in many more areas than could be served with the mileage separation method, although it asked that the proceedings in MM Docket No. 85-230 not be held in abeyance while the Commission considered the generic rule change.

Furthermore, all proceedings dealing with amending the border area table of allotments have been and will be subjected to the proposals based on contour protection. For example, the pending proposals for MM Docket 86-106 regarding Blythe, California, and for Docket 85-335 regarding Mt. Laguna, California have been dismissed due to the adoption of the *Report and Order* in MM Docket No. 87-140.

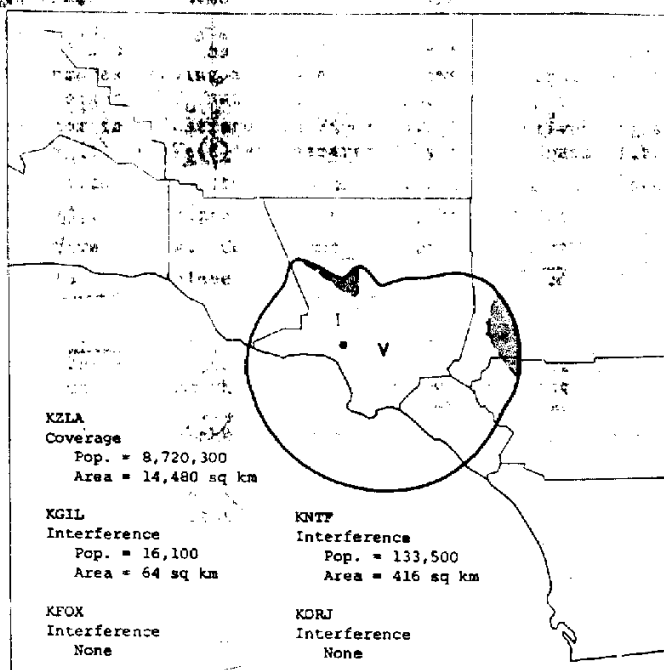
With regard to the petitioner's request that we eliminate the table of allotments prospectively, we considered and rejected that in the generic proceeding because no demonstrable public benefit was apparent in gradually phasing out the table. As we stated in the *Report and Order*, "the allotment-assignment procedure has been shown to be unnecessary by the adequate handling of frequency assignments for NCE-FM stations in the rest of the country using the demand system."

We also note that the Commission is not precluded from changing existing allocations policy even where applications had been filed for such allocations and were pending prior to the adoption of the rule making proceedings that led to such changes. *Channel 16 Public Safety Allocation*, 59 RR 2d 910, 917 (1980), citing *United States v. Storer Broadcasting*, 315 U.S. 192 (1942). In the *Channel 16* proceeding, the Commission reallocated Channel 16 from television broadcast use to public safety notwithstanding the pendency of applications for the channel's television allotment. The Commission specifically stated that the Communications Act "does not preclude the Commission from utilizing rulemaking for the orderly conduct of its business and from denying applications inconsistent with any rule ultimately adopted." *Id.* at 17. Accordingly, if existing applicants do not have vested rights in a broadcast channel to prevent its reallocation by the Commission, *a fortiori*, the petitioner in the instant case would not have any similar rights to any of the channels at issue here, nor would be able to prevent a change in allocations policy the Commission believes will promote the public interest.

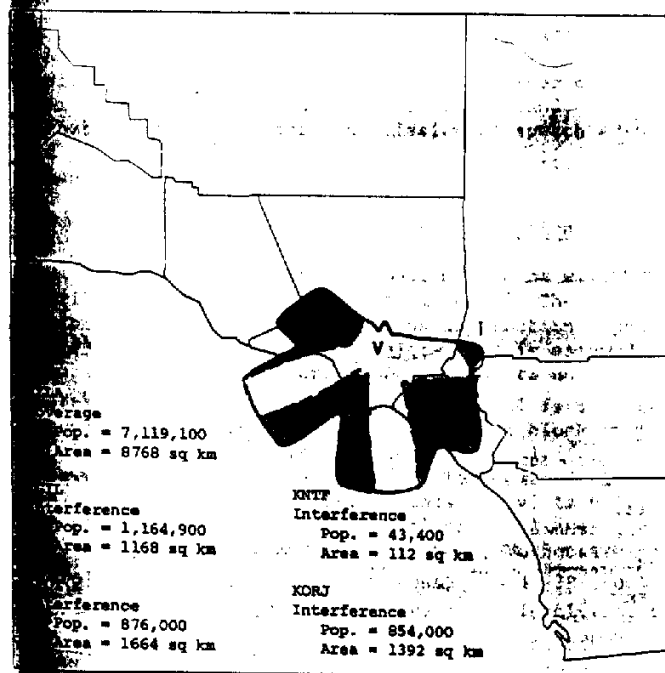
As regards the CLC compromise, which contemplates grandfathering the allotment-assignment policy, we do not deem that proposal worthy of consideration in that the Commission believes it is in the public interest, as related above, to discontinue that policy without delay.



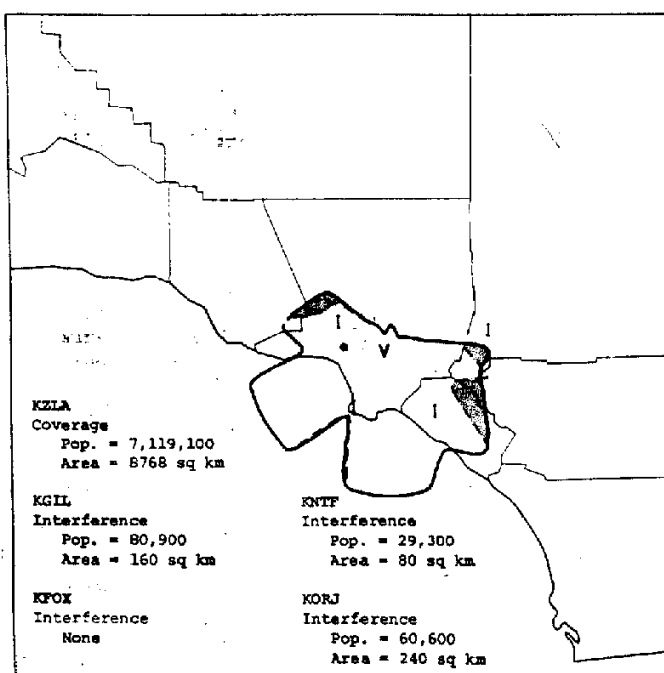
(a)



(b)

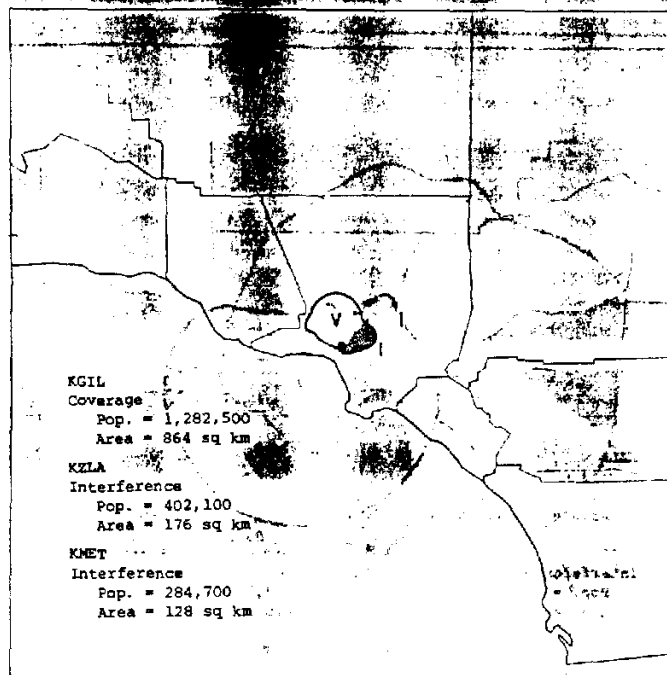


(c)

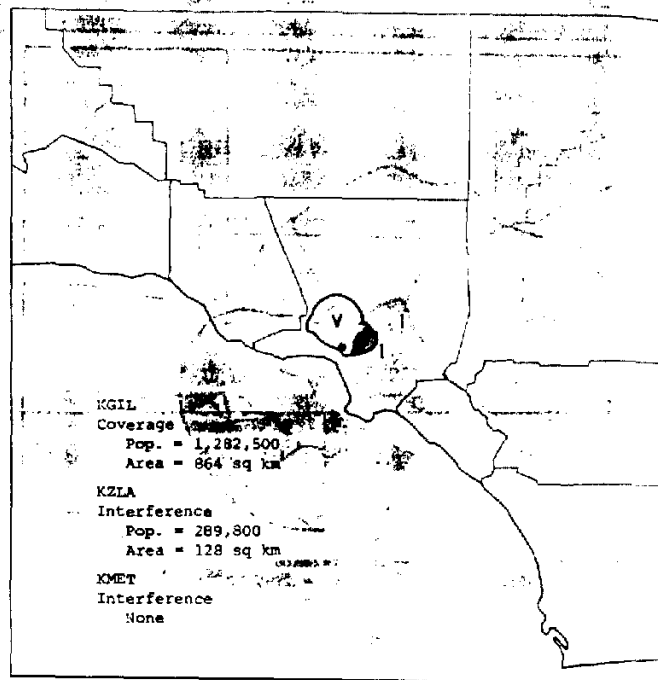


(d)

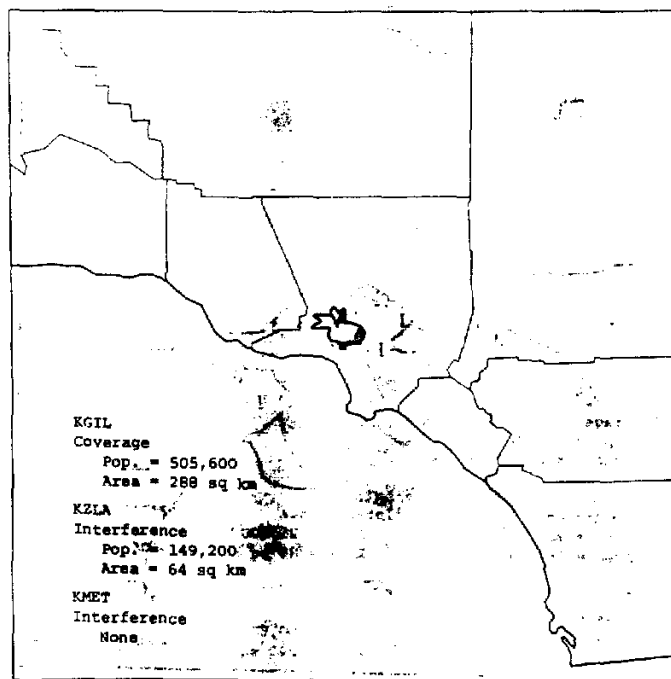
Figure 3. 55 dBuV/m coverage of station KZLA (solid contour) showing interference areas (shaded). The plots in (a) and (b) were determined using the FCC propagation curves for predicting interference and coverage while (c) and (d) were determined using the terrain sensitive ITS propagation model. The plots in (a) and (c) use a S/I = -20 dB interference threshold while (b) and (d) use a S/I = -50 dB threshold.



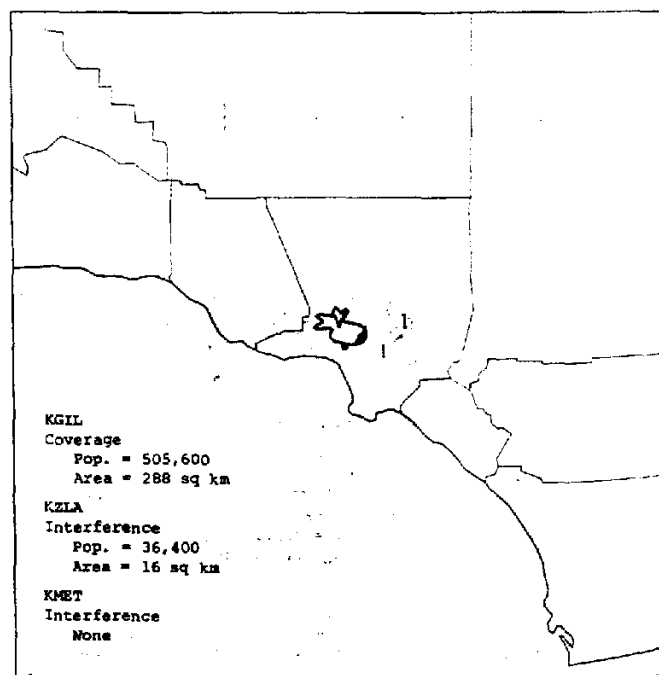
(a)



(b)



(c)



(d)

Figure 4. 55 dBμV/m coverage of station KGIL-FM (solid contour) showing interference areas (shaded). The plots in (a) and (b) were determined using the FCC propagation curves for predicting interference and coverage while (c) and (d) were determined using the terrain sensitive ITS propagation model. The plots in (a) and (c) use a S/I = -20 dB interference threshold while (b) and (d) use a S/I = -50 dB threshold.

by the Commission to the station licensee that such interference is being caused, the operation of the FM translator or FM booster station shall be suspended within three minutes and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator or FM booster station; provided, however, that short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

[55 FR 50893, Dec. 10, 1990, as amended at 60 FR 55484, Nov. 1, 1995]

§ 74.1204 Protection of FM broadcast stations and FM translators.

(a) An application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other authorized station, including commercial and noncommercial educational FM broadcast stations, FM translators and Class D (secondary) noncommercial educational FM stations, as set forth below:

(1) Commercial Class B FM Stations (Protected Contour: 0.5 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B station
Co-channel	0.05 mV/m (34 dBu)	0.5 mV/m (54 dBu)
200 kHz	0.25 mV/m (48 dBu)	0.5 mV/m (54 dBu)
400 kHz	5.00 mV/m (74 dBu)	0.5 mV/m (54 dBu)
600 kHz	50.0 mV/m (94 dBu)	0.5 mV/m (54 dBu)

(2) Commercial Class B1 FM Stations (Protected Contour: 0.7 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B1 station
Co-channel	0.07 mV/m (37 dBu)	0.7 mV/m (57 dBu)
200 kHz	0.35 mV/m (51 dBu)	0.7 mV/m (57 dBu)
400 kHz	7.00 mV/m (77 dBu)	0.7 mV/m (57 dBu)
600 kHz	70.0 mV/m (97 dBu)	0.7 mV/m (57 dBu)

(3) All Other Classes of FM Stations (Protected Contour: 1 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of any other station
Co-channel	0.1 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu)
400 kHz	10 mV/m (80 dBu)	1 mV/m (60 dBu)
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu)

(b) The following standards must be used to compute the distances to the pertinent contours:

(1) The distances to the protected contours are computed using Figure 1 of § 73.333 [F(50,50) curves] of this chapter.

(2) The distances to the interference contours are computed using Figure 1a of § 73.333 [F(50,10) curves] of this chapter. In the event that the distance to the contour is below 18 kilometers (approximately 10 miles), and therefore not covered by Figure 1a, curves in Figure 1 must be used.

(3) The effective radiated power (ERP) to be used is the maximum ERP of the main radiated lobe in the pertinent azimuthal direction. If the transmitting antenna is not horizontally polarized only, either the vertical component or the horizontal component of the ERP should be used, whichever is greater in the pertinent azimuthal direction.

(4) The antenna height to be used is the height of the radiation center above the average terrain along each pertinent radial, determined in accordance with § 73.313(d) of this chapter.

(c) An application for a change (other than a change in channel) in the authorized facilities of an FM translator station will be accepted even though overlap of field strength contours would occur with another station in an area where such overlap does not already exist, if:

(1) The total area of overlap with that station would not be increased;

(2) The area of overlap with any other station would not increase;

(3) The area of overlap does not move significantly closer to the station receiving the overlap; and,

(4) No area of overlap would be created with any station with which the overlap does not now exist.

(d) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

(e) The provisions of this section will not apply to overlap between a proposed fill-in FM translator station and its primary station operating on a first, second or third adjacent channel, provided That such operation may not result in interference to the primary station within its principal community.

(f) An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if the predicted 1 mV/m field strength contour of the FM translator station will overlap a populated area already receiving a regularly used, off-the-air signal of any authorized co-channel, first, second or third adjacent channel broadcast station, including Class D (secondary) noncommercial educational FM stations and grant of the authorization will result in interference to the reception of such signal.

(g) An application for an FM translator or an FM booster station that is 53 or 54 channels removed from an FM radio broadcast station will not be accepted for filing if it fails to meet the required separation distances set out in § 73.207 of this chapter. For purposes of determining compliance with § 73.207 of this chapter, translator stations will be treated as Class A stations and booster stations will be treated the same as their FM radio broadcast station equivalents. FM radio broadcast station equivalents will be determined in accordance with §§ 73.210 and 73.211 of this chapter, based on the booster station's ERP and HAAT. Provided, however, that FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements.

(h) An application for an FM translator station will not be accepted for filing if it specifies a location within 320 kilometers (approximately 199 miles) of either the Canadian or Mexican borders and it does not comply with § 74.1236(d) of this part.

(i) FM booster stations shall be subject to the requirement that the signal of any first adjacent channel station must exceed the signal of the booster station by 6 dB at all points within the protected contour of any first adjacent channel station, except that in the case of FM stations on adjacent channels at spacings that do not meet the minimum distance separations specified in § 73.207 of this chapter, the signal of any first adjacent channel station must exceed the signal of the booster by 6 dB at any point within the predicted interference free contour of the adjacent channel station.

(j) FM translator stations authorized prior to June 1, 1991 with facilities that do not comply with the predicted interference protection provisions of this section, may continue to operate, provided that operation is in conformance with § 74.1205 regarding actual interference. Applications for major changes in FM translator stations must specify facilities that comply with provisions of this section.

[55 FR 50894, Dec. 10, 1990, as amended at 58 FR 56176, Nov. 1, 1993; 58 FR 42025, Aug. 8, 1993]

§ 74.1205 Protection of channel 6 TV broadcast stations.

The provisions of this section apply to all applications for construction permits for new or modified facilities for a noncommercial educational FM translator station on Channels 201-220, unless the application is accompanied by a written agreement between the NCE-FM translator applicant and each affected TV Channel 6 broadcast station licensee or permittee concurring with the proposed NCE-FM translator facility.

(a) An application for a construction permit for new or modified facilities for a noncommercial educational FM translator station operating on Channels 201-220 must include a showing that demonstrates compliance with paragraph (b), (c) or (d) of this section